

# MODERN PACKAGING

January

1946



# NEWS!

## LOAD-LOK\* ADHESIVE

### ENDS SHIPPING LOSSES!

\*Reg. applied for



**Properly Glued Carload Shipments**

**Show Breakage Reductions Up To 100%**

Here's the shipping record proof of one industry. A seven carload liquor shipment shows: 1 car — 5 bottles broken; 1 car — 2 broken; 3 cars — none broken; 2 cars — one broken in each. A three car shipment shows: No breakage. Yet previous unglued shipments show a breakage average of 30 to 120 bottles per car. A 1700 case shipment of quart containers shows: 4 broken bottles. Previous unglued breakages ran as high as 90 bottles per car.

All of these glued-load shipments were long distance. All were properly unitized with **LOAD-LOK!**

LOAD-LOK is a special National adhesive. It unitizes the loading of canned goods, light bulbs, china, bottled goods and all other fragile or crushable materials—regardless of their containers. Carload and truckload shipments are unitized into floating glued loads that successfully withstand side sway and all shocks of car movements . . . and greatly reduces dunnage and bracing.

LOAD-LOK is automatically applied in two parallel strips to the bottom surface of each shipping unit . . . which is then lifted off

your regular loading conveyor and glued into the unitized load. LOAD-LOK has a high shear strength which prevents sidewise or lengthwise shifting of the stowed units. Yet, a single sharp upward blow of the hands, against its low tensile strength, releases each unit for easy unloading. The glue cost is insignificant. And the only equipment required is an inexpensive glue pan installation on your loading conveyor.



LOAD-LOK has been endorsed by leading carriers for both small and large shippers. Full details of this new handling practice are available in a new handbook: **GLUED LOADS**. Write for your copy — NOW!

Offices: 270 Madison Avenue, New York 16; 3641 So. Washenaw Avenue, Chicago 32; 735 Battery Street, San Francisco 11, and other principal cities. In Canada: Meredith, Simmons & Co., Ltd., Toronto. In England: National Adhesives, Ltd., Slough.

# National

## ADHESIVES

National also produces adhesives for: Bottle Labeling, Can Labeling, Carton Sealing, Package Wrapping, Shipping Case Sealing and Labeling, Revenue Stamping, Box Forming, Bag Making, Tube Winding.

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DETROIT



## F I R S T

NUMBER ONE CLOSURE for glass packages is the standard shallow continuous thread cap — more familiarly known as C T. First in popularity, first in economy, first in adaptability, the C T Cap is, literally and figuratively, *the top* in the closure world. First of the standard shallow continuous thread caps is the Phoenix C T. First to be standardized, first to be produced, first to be so named, the C T by Phoenix has been the number one C T Cap since its inception. The distinguished products and varied packages it seals bespeak its capabilities more convincingly than words. They inspire an apt slogan, too . . . that the Phoenix C T Cap, first of all, is *top wear for glassware*.

PHOENIX METAL CAP CO., CHICAGO 8 AND BROOKLYN 18

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# MODERN PACKAGING

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NUMBER 5

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**COVER**—This month's cover is the first of a new series for 1946 by Peter Piening. It tells the color story of packaging by means of symbols—the sun, refracted light, the hues of the rainbow arranged on the color wheel for color selection.



Adjustable for

- 10¢ size
- 39¢ size
- 59¢ size

# HIGH speed packaging at a LOW cost for ARRID'S Unique "Boot" Carton

Redington packaging machines have been *speeding* production—lowering costs at Carter Products, Inc. since 1928.

Its Arrid "boot" carton is a typical example. Though *only one* end is tucked end, this type of carton is actually *more difficult* to handle than the usual tuck-end kind!

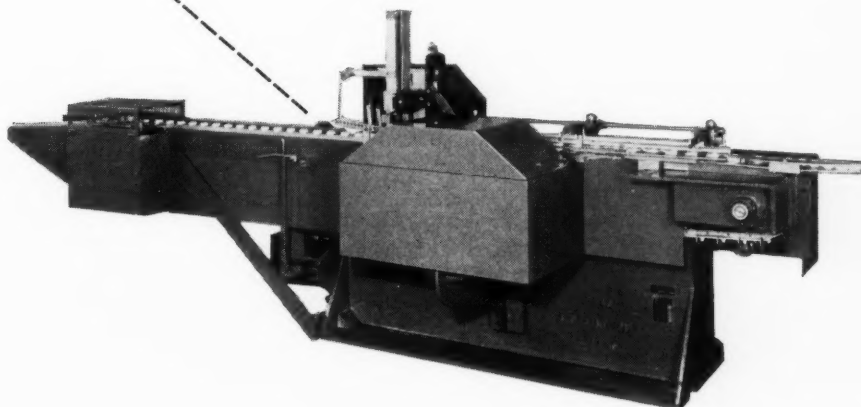
But Redington *ingeniously* designed a machine to do the job with efficiency and despatch...an *adjustable* unit that cartons the 10¢ size, the 39¢ or 59¢ size at speeds *substantially* in excess of 150 a minute.

Jars of nationally famed Arrid are fed *directly* from the capping machine into the cartoning unit's intake belt...an automatic mechanism transfers the jars to the Redington's conveyor. Cartons are fed, expanded...the jar is inserted...and *one* end of the "boot" only is tucked in.

Other Redington machines handle *other* Arrid packages and the *world famous* Carter's Little Liver Pills.

Your own packaging problem may be *more or less* complex...but whatever it is, *forty-nine* years of Redington experience are at your service. Put that experience and ingenuity to work for you.

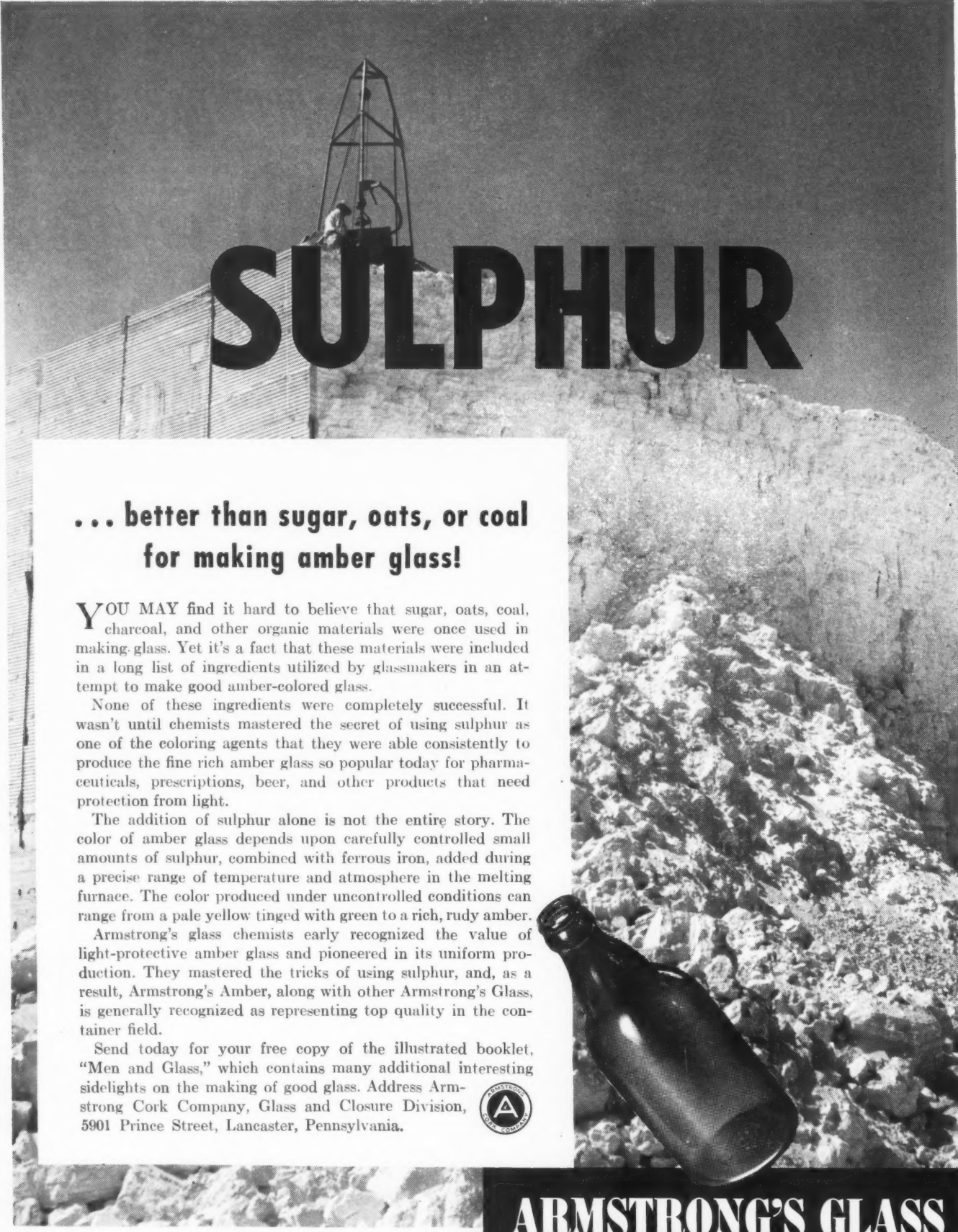
F. B. REDINGTON CO.  
(Est. 1897)  
110-112 So. Sangamon St.,  
Chicago 7, Ill.



## REDINGTON

PACKAGING MACHINES

FOR CARTONING • WRAPPING  
• SPECIAL PACKAGING



# SULPHUR

**... better than sugar, oats, or coal  
for making amber glass!**

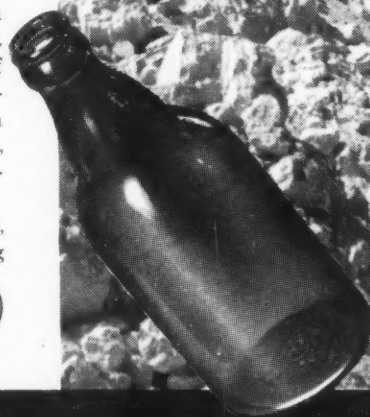
**Y**OU MAY find it hard to believe that sugar, oats, coal, charcoal, and other organic materials were once used in making glass. Yet it's a fact that these materials were included in a long list of ingredients utilized by glassmakers in an attempt to make good amber-colored glass.

None of these ingredients were completely successful. It wasn't until chemists mastered the secret of using sulphur as one of the coloring agents that they were able consistently to produce the fine rich amber glass so popular today for pharmaceuticals, prescriptions, beer, and other products that need protection from light.

The addition of sulphur alone is not the entire story. The color of amber glass depends upon carefully controlled small amounts of sulphur, combined with ferrous iron, added during a precise range of temperature and atmosphere in the melting furnace. The color produced under uncontrolled conditions can range from a pale yellow tinged with green to a rich, rudy amber.

Armstrong's glass chemists early recognized the value of light-protective amber glass and pioneered in its uniform production. They mastered the tricks of using sulphur, and, as a result, Armstrong's Amber, along with other Armstrong's Glass, is generally recognized as representing top quality in the container field.

Send today for your free copy of the illustrated booklet, "Men and Glass," which contains many additional interesting sidelights on the making of good glass. Address Armstrong Cork Company, Glass and Closure Division, 5901 Prince Street, Lancaster, Pennsylvania.



**ARMSTRONG'S GLASS**  
*and*  
**ARMSTRONG'S  
CLOSURES**



## For modern packaging . . . Geon-coated paper

*Complete color range—superior aging—heat sealability—food, chemical and water resistant*

THESE are just a few of the features that make coatings of GEON—or unsupported film of GEON—so valuable in the packaging field. In addition, coatings and film of GEON resist aging, sunlight, air, water, abrasion, oils, acids, and many other normally destructive factors. Coatings of GEON on paper increase tear strength and wet strength. They may be smooth surfaced or embossed, dull or glossy. As wrappings or liners, GEON-coated paper gives long life, complete protection.



The swatches in the picture are unusual in still another respect. They were coated with GEON latex, a new water dispersion that offers decided processing advantages. With GEON latex there are no explosive, toxic solvent fumes to contend with. Nor is there any need for cumbersome, expensive solvent recovery systems because no solvent is used.

We make no finished products of GEON. However, our development staff will be glad to work with you on any special problems. For more information, please write Dept. L-1, B. F. Goodrich Chemical Company, 324 Rose Bldg., Cleveland 15, Ohio.

### **B. F. Goodrich Chemical Company**

A DIVISION OF  
THE B. F. GOODRICH COMPANY



## Is there a salesman in your package?

**The trend** toward self-service has placed a greater responsibility than ever on the package. It must do an actual selling job on shoppers passing by.

When a product is packaged in Du Pont Cellophane, it becomes its own salesman because:

1. It **attracts** attention
2. It **shows** the contents
3. It **signifies** value and quality
4. It **assures** cleanliness and protection

All over the country, various types of products packaged in Cello-

phane are their own salesmen, and are doing the job at *low cost*.

At present the demand for Cellophane exceeds the supply, but we hope that the day is not far off when we can again fill all require-

ments. In the meantime, write for our booklet, "Help Yourself to Lower Distribution Costs."

E. I. du Pont de Nemours & Co. (Inc.), Cellophane Division, Wilmington 98, Delaware.



# Cellophane

**Shows what it Protects—at Low Cost**

BETTER THINGS FOR BETTER LIVING...THROUGH CHEMISTRY

unique facilities...

resourceful styling—

skilful production of your boxes and

displays to meet the needs of the

coming competitive market.

wood

metal

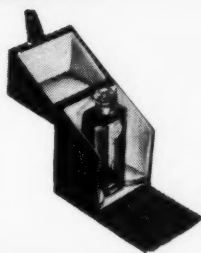
plastics

leather

fabrics

cardboard

glass



*Arrow*  
*Arrow*

*Arrow*

*Arrow*

*Arrow*

*Arrow*

BOXES AND DISPLAYS

ARROW MANUFACTURING COMPANY, INC., FIFTEENTH AND HUDSON STREETS, HOBOKEN, NEW JERSEY

*"Package  
by  
Inland"*

This is your assurance that your product will have maximum protection in shipping, at minimum cost. Correct balance, proper bracing, crush resistance, ease of handling, and advertising appeal are assured when your product is in a "Package by Inland."

INLAND CONTAINER CORPORATION

**INLAND**  
CORRUGATED FIBRE BOXES



INDIANAPOLIS, IND. • MIDDLETOWN, OHIO • EVANSVILLE, IND. • MILWAUKEE, WIS. • DETROIT, MICH.

for  
*Judy'n Gill*

packaging that delights and intrigues the  
femine heart.

designing and producing for industries that  
cater to women calls for a sort of sixth  
sense — a feeling *for just the right thing.*

that we have it in good measure is attested  
by the distinguished clientele that we serve.



**BROOKS & PORTER, INC.**

304 HUDSON STREET . . NEW YORK

*Packaging and display specialists for half a century*



LIKE THE LEADER OF AN  
ALASKAN DOG TEAM . .



SHEFFALLOY METAL TUBES  
HAVE THE STAMINA TO KEEP GOING!



UNUSUAL Endurance . . the ability to keep on serving long after less hardy tubes have broken under the strain . . that's the outstanding feature of SHEFFALLOY *Sheffield Process* Tubes. And that's why America's leading merchandisers like the makers of Mobil Handy Oil, choose this tougher tube for the greater *protection* it gives to the product, and for the greater *satisfaction* it gives to its users. If you have a packaging problem in which a husky metal tube is involved, by all means consider the extra toughness of SHEFFALLOY *Sheffield Process* Tubes! Our nearest office will gladly serve you with speed and efficiency.

**NEW ENGLAND COLLAPSIBLE TUBE CO.**

3132 S. CANAL STREET, CHICAGO 16 • NEW LONDON, CONN. • W. K. SHEFFIELD, V. P., 500 FIFTH AVENUE, NEW YORK 18  
THE WILCO COMPANY, 6800 MCKINLEY AVE., LOS ANGELES 1



## PACKAGING AND THE PRIMITIVE MAN



The problem of packaging is probably as old as mankind itself. Long before the dawn of civilization prehistoric man sought materials with which to wrap, store and transport his crude belongings. He used leaves and hides and mats, and fastened the parcels with vines or strips of animal skin.

When he set out on hunting trips or moved from one shelter to another, he carried his chattel in these primitive bundles.

**UNITED PAPERBOARD COMPANY, INC.**  
PAPERBOARD FOLDING CARTONS  
285 MADISON AVENUE NEW YORK 17, N. Y.



## ***From Tiny Tablet to Nitro-Glycerine***

If You Have A Product Similar To One Of These, we believe you will find this unique packaging offers incomparable advantages—whether the assembled unit be a two-tablet sample, a standard-sale unit of 25, 50, 100, 250 or a hospital dispensing container of 500. Our Contract Packaging Division receives your product in bulk, wraps by Sanitape-Sealtite, assembles in any size package with necessary enclosures, and ships to destination. Sanitape-Sealtite is indeed a unique packaging service. Write us for details pertinent to your particular situation.

Sanitape-Sealtite is a unique method for packaging pills, tablets, capsules, creams and powders, by which each unit or unit-dose is sealed in its own air-tight compartment—assuring complete protection.



**IVERS - LEE COMPANY • 215 CENTRAL AVE • NEWARK • N. J.**

*Let's see*



Every retailer knows that the display of actual merchandise is responsible for many a sale. When you pack in Hazel-Atlas Glass Containers your product is always on tempting display. Use good-looking H-A Jars for good sales.

HAZEL-ATLAS GLASS COMPANY



Wheeling, W. Va.

**Is**

**M·V·T**

**getting you down?**

**Mr. Converter,** is the MVT factor of your papers bothering you these days? Here's the story of Darex Thermoplastic Coatings, which will make your worries about moisture-vapor transmission a thing of the past. With Darex Thermoplastic Coatings, you are assured of a positive moisture-vapor barrier *plus* the extra advantages that make these coatings versatile and efficient. You will have excellent creasability with resistance to crackling at the folds. You will get remarkable heat-sealing characteristics. You will find that Darex Thermoplastic Coatings can take low temperatures without flaking or chipping. The film weight is controllable, enabling the even application of whatever film weight is desirable for your particular use. With one-side coatings, which take care of your MVT requirements, you have a printing surface free from coating and any waxiness to carry your message to the public. Darex Thermoplastic Coatings are free from any ingredients that impart odor or flavor. They are adapted to economical large-scale application in a variety of uses.

This is your way out of that old MVT problem. We'd be glad to send you any specific information about Darex Thermoplastic Coatings that you would like. Write to

**DEWEY and ALMY CHEMICAL COMPANY**

CAMBRIDGE 40, MASSACHUSETTS

**DAREX  
THERMOPLASTIC COATINGS**



***Before the Curtain goes up...***

**NATIONWIDE BUSINESS  
EXPANSION**

*... how about a **DRESS** rehearsal  
for your product . . . . .*

*"The Better the Product  
the More Important  
the Package"*

**INTRIGUING SET-UP BOXES  
CREATIVE FOLDING CARTONS  
UNUSUAL MERCHANDISE  
COUNTER DISPLAYS  
SPECIALIZED PACKAGING  
ROUND BOXES**

**ACME PAPER BOX COMPANY** STATE AT SIXTIETH ST. CHICAGO 21, ILL.

**CREATORS • DESIGNERS • MANUFACTURERS**

# JAR CLOSURES! IMMEDIATE DELIVERY!

A diversity of colors, styles and sizes including standard 33, 38, 43, 45, 48, 51, 53, 58, 63, 70, 83 and 100 mm.

*They're here!* Plastic molded jar closures are now in full production . . . and at a lowered price scale! New MACK MOLDING automatic set-ups permit greater production economies and efficiencies.

*They're good!* Plastic molded closures combine rigidity and strength with smart lustrous eye-appeal. They are sanitary, non-corrosive and easily cleaned.

*They're accepted!* Easily removed, easily replaced—just ask the customer. Write, wire or telephone us about your requirements; your inquiries will be treated in confidence.

If you are not already acquainted with the facilities offered by our three complete and up-to-date plants, the new 8 page booklet "MACK[MOLDED EXCELLENCE]" will be sent on request. Write for your copy today.

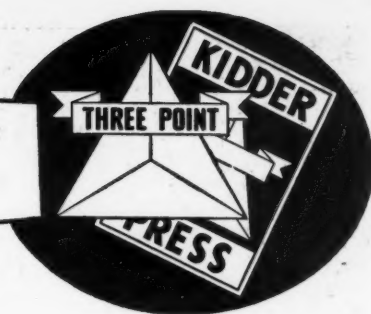
**MACK MOLDING COMPANY**  
INCORPORATED  
160 MAIN STREET, WAYNE, NEW JERSEY

**Mack**  
**MOLDED**  
**EXCELLENCE**



SALES OFFICES: NEW YORK CITY, CHICAGO, DETROIT, INDIANAPOLIS, BOSTON & ST. LOUIS

# KIDDER POINTERS



## No. 11. Observations of trends and indications in packaging . . . noted by the manufacturers of Kidder "3 Point" Presses, Kidder Press Company, Inc., Dover, N. H.

"Paper Properties", a highly informative article on some properties of paper, their connection with printing and test methods for their evaluation, appears in THE AMERICAN PRESSMAN for October '45. John Buss, Provincial Paper, Ltd. of Toronto prepared the material for the Study Group of Toronto Printing Pressmen and Assistants' Union No. 10. It's really worth reading, whether you're a converter or a packager . . . or a printer.

An outstanding example of picture packaging through redesign is the new BirdsEye-Snider Division of General Foods . . . with outerwrap of special waxed paper by Marathon Corporation — with natural-color representation of contents . . . designed for consumer attention. MODERN PACKAGING for September '45 tells the story with illustrations. There's also a frozen foods-packaged-in-cellophane story.

In a self-service store, the package is on its own — which means the packages with "take-me-home" appeal will win Mrs. Consumer. Proper design, eye appeal and message on the package goods will give a smart manufacturer a head start. L. A. Johnson, president of Johnson's Foods, Inc. Syracuse, N. Y. tells the story, illustrated, in "Super-Market Test of Buy Appeal" in MODERN PACKAGING for September '45. Incidentally, cellophane packaging with identifying label rated high in one selling test for macaroni.

"Selling with Color", a new book by Faber Birren (McGraw-Hill Publishing Co., New York), is available at a nominal charge. Packagers will be particularly interested in Chapter 10 on the ideal package and its achievement.

Seafood, Pliofilm wrapped, retains its original tangy flavor far longer and better than when wrapped with other types of material . . . meaning shipment of seafoods to far inland points with its sea-water freshness is a coming air cargo "regular". Read the story in PACKAGING PARADE for September '45.

A waterproof, fungus-resistant plastic dip coating for paperboard cartons and other containers, as an improvement over wax compounds now in use, is being sought through a research program conducted at the Institute of Paper Chemistry, Appleton, Wisconsin, under Dr. Harry F. Lewis, coordinated with a study of plastics films and coatings being conducted at Brooklyn Polytechnic Institute by QM Corps under Capt. William H. Aiken. Persons or organizations wishing to participate in the project should address Dr. Lewis.

Color standards to enable apple growers to determine whether their trees were receiving sufficient nitrogen fertilizer to produce the finest fruit was a recent fascinating project at the Interchemical Research Laboratories of International Printing Ink. If you want the Apple Leaf Laboratory Report, write to IPI, Division Interchemical Corp., 350 Fifth Avenue, New York 1.

Saleswise, the appearance of a package runs a close second to the quality of its product. Pre-packaged fresh tomatoes, meeting great success, have stimulated experiments in wrapping many other kinds of fruits and vegetables, principally in open trays over-all machine wrapped, for which Package Machinery Company, Springfield, Mass., has developed a machine with a production speed of 90 trays per minute. Effective display is accomplished through plain or printed cellophane wrap, or a combination wrap of cellophane and waxed paper. Read the story, illustrated, in PACKAGING PARADE, September '45.

Kriston, a new non-flammable thermosetting casting plastic, possessing high optical and electrical properties, good resistance to abrasion, oils, greases and most chemicals has been developed by B. F. Goodrich Chemical Co., Cleveland, Ohio. It may also serve as a pressure laminant for paper, fabrics and wood — its clarity and hardness are suitable for use in decorative and style applications. The December issue of MODERN PLASTICS scheduled a detailed story.

**KIDDER PRESS COMPANY, INC., Printing Machinery, Dover, N. H.**

## WRAPPER ACHIEVEMENT OF THE MONTH

These wrappers are designed especially for sales appeal and are printed on Kidder 36"x72" rotary presses using paper, inks and wax developed and controlled by Specialty Papers laboratory to give their customers the results which their requirements for waxed papers demand and justify. A solid red and blue design contrasts with paper-whiteness for an outstanding point-of-sale wrapper for Bamby Bread by New England Baking Company, Providence, R. I., while the colorful appeal of the Kroger wrapper lies in an excellent half-tone cracker reproduction on solid red background. Maximum color with minimum ink coverage is achieved with a neat blue design featuring a diagonal striped background for the Fleischmann's Yeast wrapper. For such outstanding wrappers as these, Kidder salutes

**THE SPECIALTY PAPERS COMPANY**  
DAYTON, OHIO

"Waxed Paper Protects Freshness"



## THREE PRINTING METHODS . . . THREE PRINTING CHARACTERISTICS

*Available to Converters in the  
Kidder "3 Point" Line*

Three general printing methods, letterpress, aniline and gravure . . . all printing from rolls . . . are available through Kidder Presses. The "3 Point" trademark which has long been Kidder's identification for the three characteristics of quality printing (shown in the panel) has been broadened in interpretation to embrace the three types of printing presses for converters.

KIDDER MULTI-COLOR PRESSES, used for about 90% of the country's bread wrappings, have as press associates:

ANILINE-TYPE PRESSES, introduced prewar as the "Aniliner" and now evolved to heavier presses giving high-speed, high quality runs . . . with

the new narrow-model "Celloprinter", introduced for the cellophane field.

GRAVURE PRESSES, identified as "Unitype" because they are designed for addition of units as customer-business expands.

KIDDER SLITTERS and REWINDERS, to be presented through new models for selection by the converting field.

Yes, Kidder is back at work designing and building printing presses for converters . . . Kidder engineers will think ahead with you on trends in packaging and in inks . . . or consult on the new high-speed slitters and rewinders (up to 115").

CONTROL OVER  
THE PAPER  
PROPER  
DISTRIBUTION OF  
INK  
ACCURACY OF THE  
IMPRESSION



### KIDDER

Manufacturer of "3 Point" Presses—so-called because they fulfill the three major requirements for perfect printing.



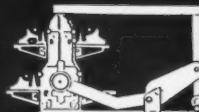
**MULTI-COLOR  
LETTER PRESSES**

for waxed paper, box wrappers, etc.,  
rewound or sheet-delivered — up  
to 72 inches.



**MULTI-COLOR "UNITYPE"  
GRAVURE PRESSES**

for cellophane, foil, pliofilm, etc.,  
— up to 36 inches.



**"ANILINER" and "CELLOPRINTER"  
MULTI-COLOR PRESSES**

for decorative papers, cellophane,  
glassine, etc., — up to 65 inches.



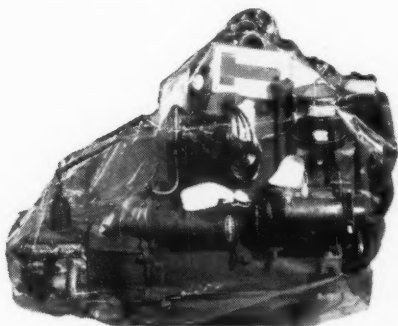
**SLITTERS AND  
REWINDERS**

for paper mills, finishing room  
and small-roll, high-speed slitting  
— up to 115 inches.



# Case of the Missing Hours

CASE No. 824



During the war—when every minute was vital to Victory—airplane engines by the thousands were sped to overseas destinations, safely sealed against rust and corrosion in Kennedy moisture-vapor-proof engine bags—obviating laborious, time-consuming grease-slushing methods—saving countless thousands of hours

which otherwise would have been irretrievably lost.

Now, with time an immensely important factor in capturing postwar markets on a profitable basis, a wide range of time-saving, weight-saving Kennedy protective packaging is available for safeguarding products of virtually every nature.

It makes little difference the kind of protection required—whether against dirt, dust, moisture, water, vapor, air—Kennedy makes it. And Kennedy's long and successful record working with all proved types of protective materials assures that exactly the right material will be selected to protect your product best.

Let one of Kennedy's expert engineers discuss your packaging problems with you. No cost—no obligation.

KENNEDY CAR LINER & BAG COMPANY • SHELBYVILLE, IND.

CANADIAN PLANT: WOODSTOCK, ONTARIO • SALES OFFICES: NEW YORK, CHICAGO, CLEVELAND, DETROIT, KANSAS CITY, LOS ANGELES, ATLANTA

FABRICATORS IN WATERPROOF PAPER • KRAFT PAPER  
PLIOFILM • SARAN • VINYL • METAL FOIL • CELLOPHANES



JANUARY • 1946

21

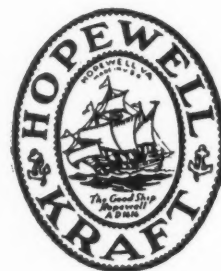
# Good News!



The salesman who comes into your office with necktie askew, with rumpled suit and mussed hair isn't likely to make the sale. Your package is one of your most potent salesmen. You have spent money, lots of money perhaps, on designing it, "clothing" it, grooming it for its selling job. It is important that it gets to the point of contact safe and sound.

That's where the strong, tough, versatile Kraft boards made by Hummel-Ross come into the picture. From these are made those stout packages that get your products to their destination looking as fresh as when they left your plant.

But don't take our word for it! Ask your box manufacturer about Hummel-Ross. He knows.



Originators • Creators

**HUMMEL-ROSS FIBRE CORPORATION**

Hopewell, Virginia, U. S. A.

# WANT A CAN LABEL THAT'S DIFFERENT ?



Not just different but *better!* Aluminum foil labels leap to the eye. Their sparkling, clean-cut beauty makes them eye-stoppers on any shelf or counter.

On fibre cans they have additional advantages: Foil labels give fibre cans a metal can appearance. Also, foil is greaseproof and insectproof. And by reflecting radiant heat, they keep contents cooler.

Your label designer and printer will be interested in these facts: Alcoa Aluminum Foil comes in either bright or satin finish, plain,

lacquered or embossed. It is paper-backed to facilitate bonding to the can and give extra strength. Printing, in any colors you want, can be done on Alcoa Foil by practically any of the standard printing processes. Colors can be made opaque or sufficiently transparent to allow the metallic sheen to show through.

Have your label designer submit ideas for foil labels. For samples of Alcoa Foil, write ALUMINUM COMPANY OF AMERICA, 2129 Gulf Building, Pittsburgh 19, Pennsylvania.



## ALCOA ALUMINUM FOIL



**They have to**

MODERN PACKAGING

# "make eyes" at your product...

BEFORE YOU MAKE THE SALE



Step up the EYE-Q of  
your package at the point  
of sale... with whiter, brighter

Coated Lithwite Cartons

**M**AKES YOUR PACKAGE MORE ATTRACTIVE... more eye-appealing. The whiter, more velvety surface of Coated Lithwite brings colors up more brilliantly, reproduces half-tones with persuasive realism. Smoother. Brighter. Rub-resistant. Chalk-free. It forms a perfect base for printing inks. Packages look crisper, fresher—have a "quality" look.

Made by a revolutionary new process, *Coated Lithwite* is the amazing paperboard that is formed, made and coated in one high-speed operation. Proved and improved for seven years.

Fewer "jammers" and "leakers." *Coated Lithwite* folds without flaking or shattering. Takes a tight positive seal. Production of *Coated Lithwite* cartons is currently sold up. But get full facts about *Coated Lithwite* cartons now. Ask a Gardner-Richardson sales representative to call.

More eyes reach for your product in...

## Coated Lithwite Cartons

THE GARDNER-RICHARDSON CO. • Manufacturers of Folding Cartons and Boxboard • Middletown, Ohio

Sales Representatives in Principal Cities: PHILADELPHIA • CLEVELAND • CHICAGO • ST. LOUIS • NEW YORK • BOSTON • PITTSBURGH • DETROIT

# Elmer's

## OF NEW ORLEANS Protects Its Products *with* SEFTON'S CANS



It's a wise manufacturer who makes sure that his product gets to the consumer in good shape. Elmer Candy Co. of New Orleans uses Sefton cans regularly because, (1) they're easy to pack, (2) they factory-seal any product, and (3) they're tamper-proof! Elmer's knows, too, that Sefton's string-opening cans, especially, are easy to open, and may be closed again, if necessary. Investigate today . . . see how Sefton Fibre Cans can protect your products!



DISTRICT OFFICES: • Los Angeles • San Francisco • Denver • Tampa • Chicago • Des Moines • New Orleans • Boston • Detroit • Kansas City • St. Paul  
Omaha • New York • Cincinnati • Cleveland • Oklahoma City • Pittsburgh • Memphis • Nashville • Dallas • Houston • Salt Lake City • Seattle

Booklet With the Bottle?  
...Another Reason for



**CEL-O-SEAL**  
TRADE MARK



The recipe booklet that goes with every bottle of Holland House Cocktail-Mix is bound to stay on—by the smart-looking “Cel-O-Seal” band that tops off the bottle. The booklet is held neatly and securely, so that it can’t slip off or obscure the label.

You’ll get all-round advantages with Du Pont “Cel-O-Seal” cellulose bands. In distinctive colors and color combinations, and *indelibly* printed with your monogram and sales message, they’re valuable merchandising aids. And they do a big protective job . . . guard against leakage, evaporation, contamination and tampering. Write today for full information.

You can get “Cel-O-Seal” bands from: E. I. du Pont de Nemours & Co. (Inc.), “Cel-O-Seal” Section, Empire State Bldg., New York City 1 • Armstrong Cork Company, Glass and Closure Div., Lancaster, Pa. • I. F. Schnier Company, 683 Bryant St., San Francisco 7, Calif.

\*Trade Mark



REG. U.S. PAT. OFF.  
BETTER THINGS FOR BETTER LIVING  
... THROUGH CHEMISTRY

**DU PONT “CEL-O-SEAL” BANDS**



This is the home of the famous Standard-Knapp packaging equipment. This is the plant in which some of America's finest case packers and case sealers, labelers and other equipment are manufactured. It is one of the finest and most up-to-date packaging machinery manufacturing plants in the country.

Standard-Knapp equipment is known for its unique engineering, its sound construction, its long life and low maintenance. Most Standard-Knapp equipment is especially designed and built to perform specific functions. Each industry has its own packaging problems and Standard Knapp engineering and construction skill has the answer to most of them.

We will be glad to give you further details and information. We would enjoy having you visit our plant at any time.

## STANDARD-KNAPP CORP.

MANUFACTURERS OF CASE SEALING, CASE PACKAGING AND CAN LABELING MACHINES  
FACTORY and GENERAL OFFICES—PORTLAND, CONNECTICUT

570 Lexington Avenue	221 North LaSalle St.	145 Public Square	300 Seventh Street
NEW YORK 22, N. Y.	CHICAGO 1, ILL.	CLEVELAND 14, OHIO	SAN FRANCISCO 3, CALIF.
420 S. San Pedro Street	3224 Western Avenue	1208 S. W. Yamhill Street	Paul Brown Building
LOS ANGELES 13, CALIF.	SEATTLE 99, WASH.	PORTLAND 5, OREGON	ST. LOUIS 1, MO.
Windsor House, Victoria Street, LONDON, ENGLAND			

# Planned

IN THE DOBECKMUN LABORATORIES

This moisture-vapor-proof package successfully retains original 40% moisture content required for growth and 9 month life of enclosed bacteria. Also inhibits attack on package by these bacteria. Only Metalam could meet these two difficult requirements of Kalo Inoculant Company, Quincy, Illinois.

**GARDEN  
INOCULATION**  
Stimulates  
Growth of

PEAS •  
BEANS •  
EDIBLE  
SOYBEANS •  
LUPINES •

• UNI-CULTURE •

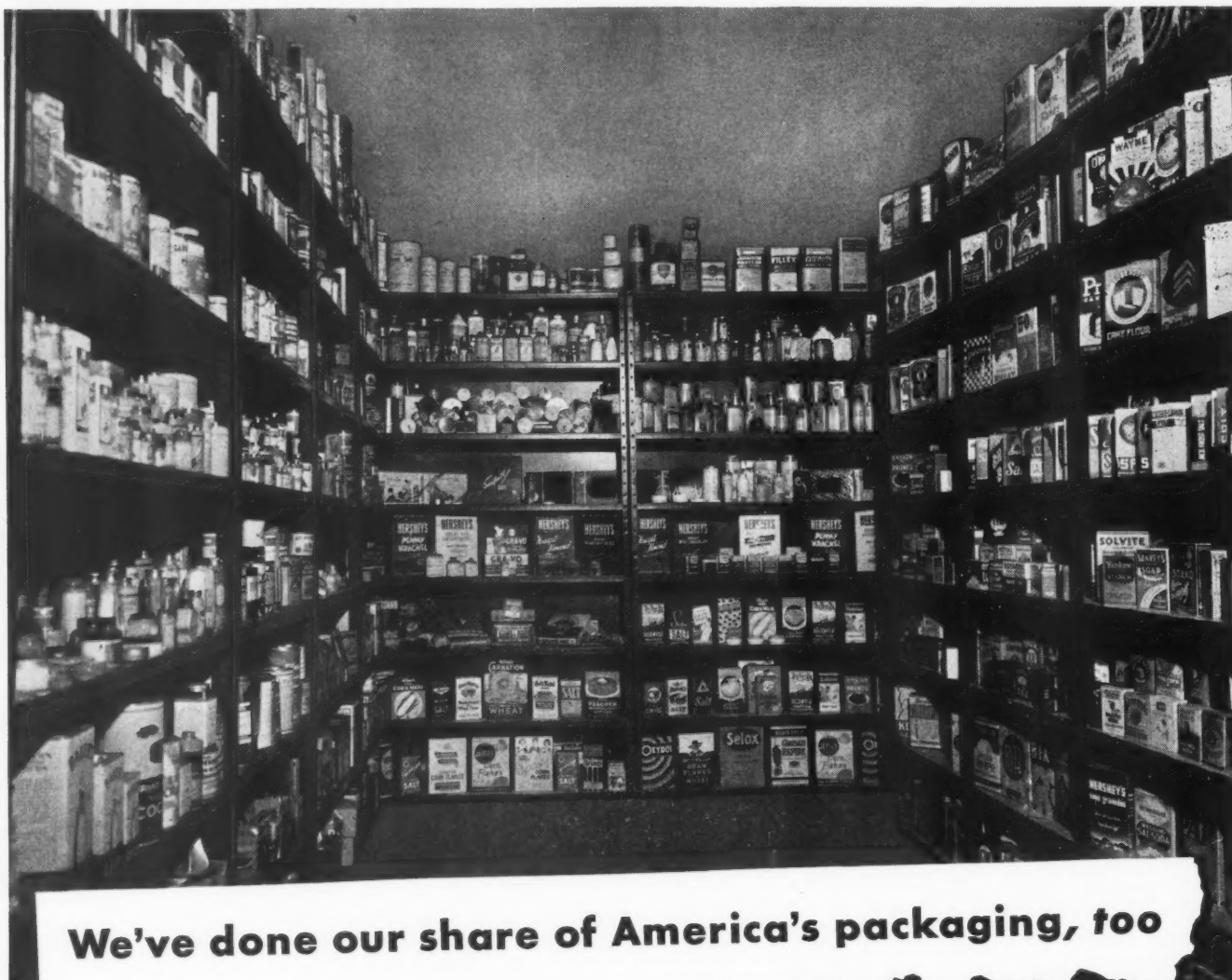
Dobeckmun creative service developed this Metalam package, made of pure sheet aluminum supported by acetate film. For dehydrated fruits or foods, pharmaceuticals or chemicals . . . in fact, for any product whose moisture content must remain fixed, heat-sealing Metalam gives permanent, positive protection. (Often supplied in rolls for automatic packaging.) Multicolor printing on the film adds the attractive sparkle that leads to sales. The Dobeckmun Company, Cleveland 1, Ohio. Branches at Boston, Chicago, Cincinnati, Los Angeles, New York, Philadelphia, San Francisco and Seattle. Representatives everywhere.

## DOBECKMUN

Self-selling packages in processed films and foils

TRY YOUR PROBLEM PRODUCT IN THIS HEAT-SEALING METALAM

THIS IS A COLLECTION OF SAMPLES OF JUST SOME OF THE PRODUCTS PACKAGED BY S&S MACHINES



## We've done our share of America's packaging, too

In many lines, the bulk of production of the industries is S&S packaged. . . . In many more, the job is split about evenly between S&S and others. . . . In almost every industry where the material to be packaged is a powder, granular substance or paste, S&S has supplied a goodly percentage of the packaging machines. This is easy to understand when you

remember that, in many cases, it has been S&S improvements that have made the advances in packaging technique — that have made practical many better packages at lower unit costs. Further, it has been S&S developments, like that of the first tight-wrapper, that alone have made possible many new triumphs of modern packaging.

DURING THE WAR . . . the entire output of S & S machines was under priority regulations. Today we are doing our utmost to turn out machines to fill the avalanche of orders released by the sudden end of hostilities. We shall be glad to take care of your order as soon as possible, and remember . . .

an S & S machine is worth waiting for. CONSULT US . . . if you are planning to package new products; or if you are looking for better, more economical packaging methods for your present lines. Our engineering staff is always available to help in the solution of your problems.

A GOODLY PERCENTAGE OF  
AMERICA'S FAMOUS PRODUCTS  
ARE PACKAGED ON

**S & S** Filling Machines

**S & S** Carton Filling and  
Sealing Machines

**S & S** Bag and Envelope  
Fillers and Sealers

**S & S** Tight-Wrappers

**S & S** Complete Packaging  
Line

# STOKES & SMITH CO

FRANKFORD, PHILADELPHIA, U. S. A.

FILLING • PACKAGING • WRAPPING MACHINES



# "Cheesecake!"

SAID Mrs. Morrencey Abernathy, III

Not every "lady" would put it so bluntly—but that's how thousands of women react to the poor taste of an *over-fancy* package.

To make packages *really* attractive to women is an art vital to selling—because *women* buy three-fourths of all goods sold at retail—and—three-fourths of their buying

decisions (surveys show) are made at the point-of-sale.

Thus it is highly significant that most of the leading cosmetic manufacturers—who need no surveys to know their packages must attract women—come to Ritchie for their packages.

*Never underestimate the power of the package.*

LET RITCHIE WORK WITH YOU to develop a better package at low unit cost. One that will instantly identify, fully protect and conveniently dispense your product—practical—production-planned—easy to fill or pack—to handle, to stack and display—but *above all* designed for eye-appeal, for quality impression—a package that SELLS!



**Never**  
*the Power*

W.C. *Ritchie*  
and COMPANY  
8840 Baltimore Avenue • Chicago 17

- ★ SET-UP PAPER BOXES
- ★ FIBRE CANS
- ★ TRANSPARENT PACKAGES

**Underestimate**  
*of the Package!*

Copyright 1945, W. C. Ritchie & Co.

NEW YORK

• DETROIT

• LOS ANGELES

• ST. LOUIS

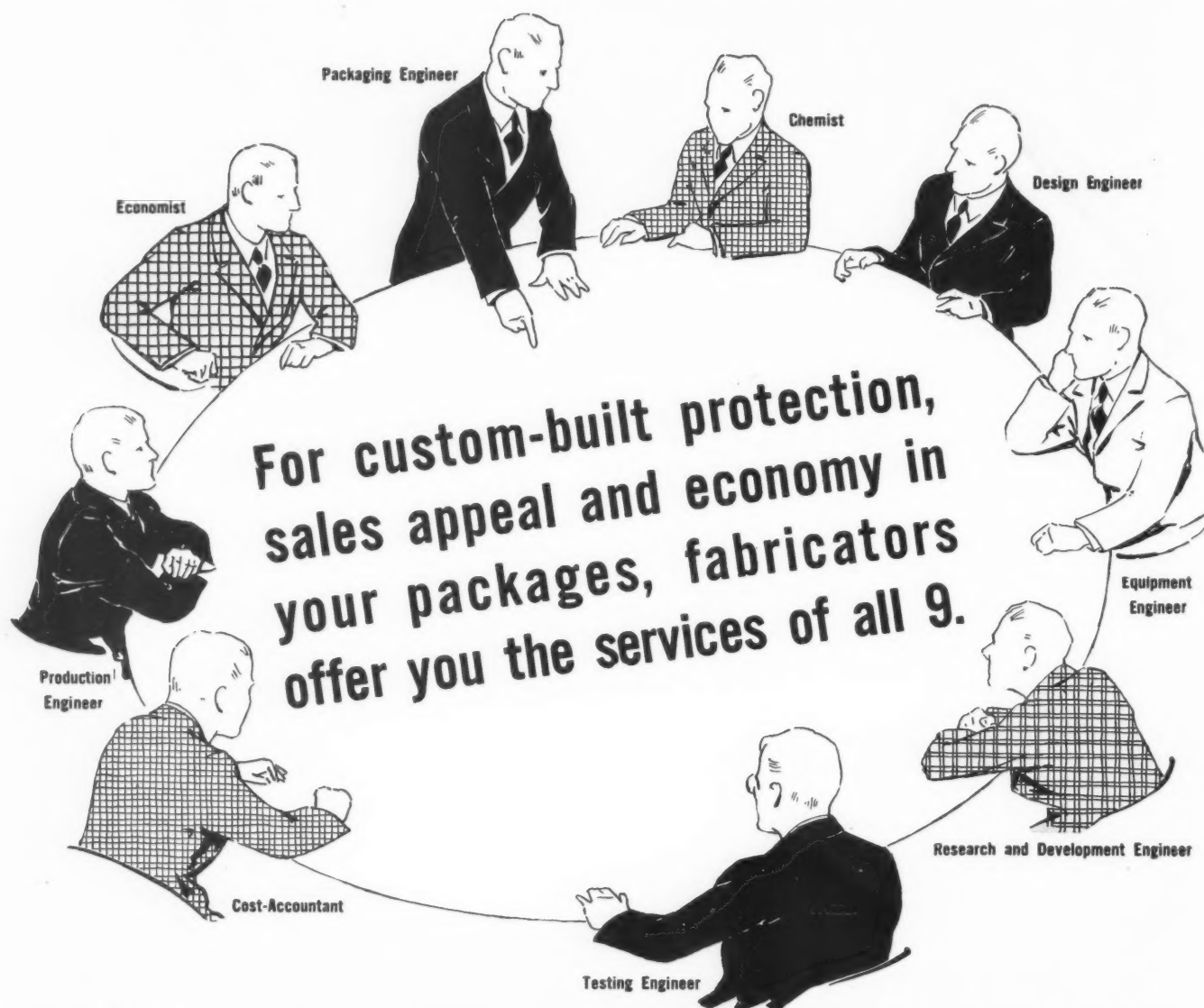
• MINNEAPOLIS

JANUARY • 1946

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The "know-how" of 9 specialists

# FLEXIBLE



# available to you when you specify **PACKAGING**



"CAN you give me a package that acts as a moisture-vapor barrier?"

"Will your package maintain the vitamin potency of my product?"

"How can I get more shelf-appeal for my product?"

"Can you give me a package that will reduce transportation costs?"

These are typical questions put to us as fabricators. *Every manufacturer* is looking for adequate protection for his product, high shelf prominence and brand recognition, ease of use, and over-all economy.

That's why, when you buy flexible packaging, you get the services of 9 specialists to help you solve all phases of packaging.

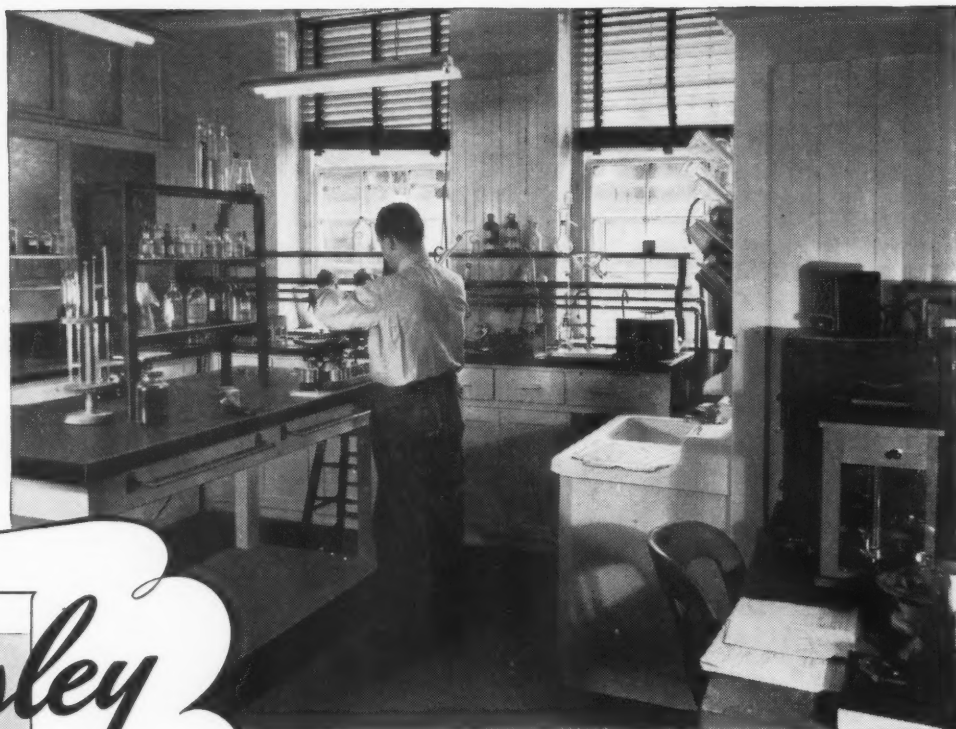
These specialists know the right materials or the right combinations of materials to use. They are free to custom-build your package to meet your most complex need.

If you have a new product that requires a package, or if you have a packaging problem that has not been satisfactorily solved, put these experts to work for you. Simply write to the address below.

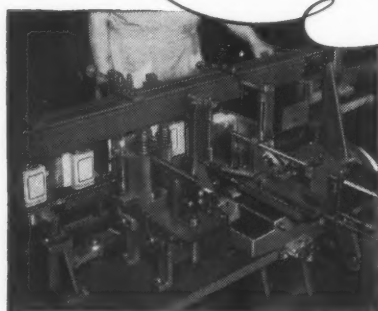
**FLEXIBLE PACKAGING INSTITUTE**  
369 Lexington Avenue » » » » New York 17, N. Y.

Allied Paper Bag Corporation, Baltimore, Md.  
American Bag & Paper Co., Philadelphia, Pa.  
The American Paper Goods Company,  
Kensington, Conn. and Chicago, Ill.  
Arkell & Smiths, New York, N. Y.  
Arlette, Inc., Bloomfield, N. J.  
Beier & Company, Chicago, Ill.  
Bemis Bros. Bag Co., Indianapolis, Ind.  
Benj. C. Betner Co., Devon, Pa.  
Alfred Bleyer & Co., Brooklyn, N. Y.  
Brown Paper Goods Co., Chicago, Ill.  
Capital Envelope Co., Ltd., Los Angeles, Calif.  
Central States Paper & Bag Co., St. Louis, Mo.  
Central Waxed Paper Company, Chicago, Ill.  
Cupples-Hesse Corporation, St. Louis, Missouri  
Custom-Made Paper Bag Co., Long Island City, N.Y.  
Diaphane Bag Corporation, Philadelphia, Pa.  
Dixie Wax Paper Co.,  
Memphis, Tenn. and Dallas, Texas  
The Jaite Company, Jaite, Ohio  
Kehr Paper Products Co., Philadelphia, Pa.  
Kellogg Container Division,  
United States Envelope Co., Springfield, Mass.  
Kennedy Car Liner and Bag Company, Inc.,  
Shelbyville, Ind.  
Marathon Corporation, Menasha, Wis.  
Mehl Manufacturing Company, Cincinnati, Ohio  
Monoca Bag & Mfg. Co., Inc., Toledo, Ohio  
Moser Bag & Paper Company, Cleveland, Ohio  
Oneida Paper Products, Inc., New York, N. Y.  
Orchard Paper Company, St. Louis, Mo.  
Paramount Paper Products Co., Inc.,  
Philadelphia, Pa.  
Thomas M. Royal & Co., Philadelphia, Pa.  
C. E. Stevens Bros. Inc., Baltimore, Md.  
Union Bag & Paper Corporation, New York, N. Y.  
Western Paper Converting Co., Salem, Oregon





## Here's What Paisley Scientific Research Means to You!



### PAISLEY BOTTLE LABEL MACHINE GLUE No. 2978

A fast labeling glue for World, Ermold, Oslund, Pony Labelrite, National, semi-or-fully automatic machines. Also for Pneumatic Scale, McDonald, Weeks, World Straight-away type machines. This one glue embodies all the qualities desired in the perfect machine labeling glue for bottles. Quick tack, non-stiffening, non-feathering, it handles plain, foil, or varnished labels with equal ease.

**E**ACH adhesive is compounded exactly for your particular problem, from the raw materials best suited to your needs. There is no compromise. Your problem determines the formula, for PAISLEY works with *all* adhesive raw material bases, such as: 1. Starch, 2. Animal, 3. Protein, 4. Resin, 5. Rubber, 6. Asphalt, 7. Wax, 8. Gum.

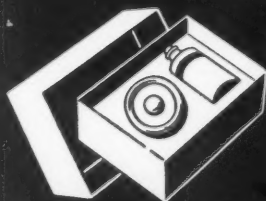
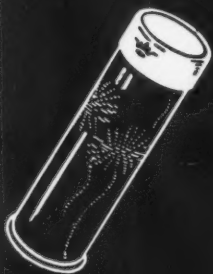
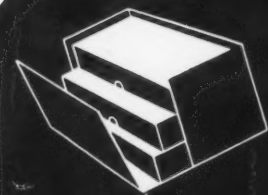
Thousands of adhesive formulae have been compounded from these main adhesive bases, each one having special qualities that suit it to a specific packaging, labeling or sealing operation. So, for tailor-made adhesives compounded specifically for your own adhesive operation . . . send all the facts to Paisley.

**SEND FOR . . .** *the convenient Adhesive Operation Data Sheet. It helps you supply the information our adhesive chemists require concerning your adhesive operation. This data sheet is your guide towards getting the ONE best, most efficient adhesive for the operation you describe. Trial shipment will be sent on approval if desired. This skilled laboratory service does not obligate you. It's the SURE . . . the modern way to buy adhesives!*

## PAISLEY PRODUCTS INCORPORATED

Manufacturers of Glues, Pastes, Resin Adhesives, Cements, and Related Chemical Products

1770 CANALPORT AVE., CHICAGO 16, ILL. ★ 630 W. 51st STREET, NEW YORK 19, N. Y.



*does your product demand...*  
**GOOD TASTE?**

Good selling demands good taste, and the candy and confectionery industry believes that nothing whets the appetite as attractively packaged candy. That's why more than 155 million\* set-up boxes are used by the confectionery industry, proving again that packaging is advertising. Use these sales conscious containers, for the set-up box has these points of superiority custom-built right into every box . . . added strength, added beauty, greater take-home value, plus proven sales appeal.

The billion dollar candy industry\* expects even bigger business within the next few years, and is depending upon set-up boxes for added sales appeal . . . catering to customers who demand good taste.

\* Write or call your nearest paper box manufacturer for survey DEPT. 12 "Confectionery Industry".

**NATIONAL PAPER BOX MANUFACTURERS**  
*Association*

AND COOPERATING SUPPLIERS

Liberty Trust Building • Philadelphia 7, Penn.

FOR INFORMATION OR SERVICE

• CONSULT THE NEAREST SET-UP BOX MANUFACTURER

JANUARY • 1946

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IT'S WHAT YOU DO WITH CELLULOSE FIBRE THAT COUNTS



## Getting the eye to say "Buy"

No one knows whether it's the gay color or honey fragrance of a particular flower that first attracts the bee.

But alert manufacturers do know that attractive packaging of foods, drug products, clothing accessories, and many household items is very important in getting the eye to say "buy."

As sales competition gets keener, an attractive label or wrap will be more important than ever—for then it will be package against package, name against name.

So give your product the break it deserves. Give it an attractive package. Give it an appealing label or wrap printed on paper that adds its own sparkle and life. Use a quality paper that expresses the quality of your product.

Oxford's quality papers, that really give products a "lift," are papers that do the job. They are made to print well, and they perform well on automatic labeling and wrapping machines.

These fine papers are backed by Oxford's long reputation for quality. They are the result of continuous research in getting the best out of cellulose fibre—the result of making over a thousand miles of quality paper daily for many years.

And, as always, Oxford counsel is yours for the asking.



## OXFORD PAPER COMPANY

230 Park Avenue, New York 17, N.Y.

*MILLS at Rumford, Maine and  
West Carrollton, Ohio*

*WESTERN SALES OFFICE:  
35 East Wacker Drive, Chicago 1, Ill.*

«»

*Included in Oxford's line of quality printing and label papers are:*

ENAMEL-COATED — Polar Superfine, Mainefold, White Seal, Rumford Enamel and Rumford Litho C1S; UNCOATED—Engravatone, Carfax, Aquaset Offset, Duplex Label and Oxford Super, English Finish and Antique.

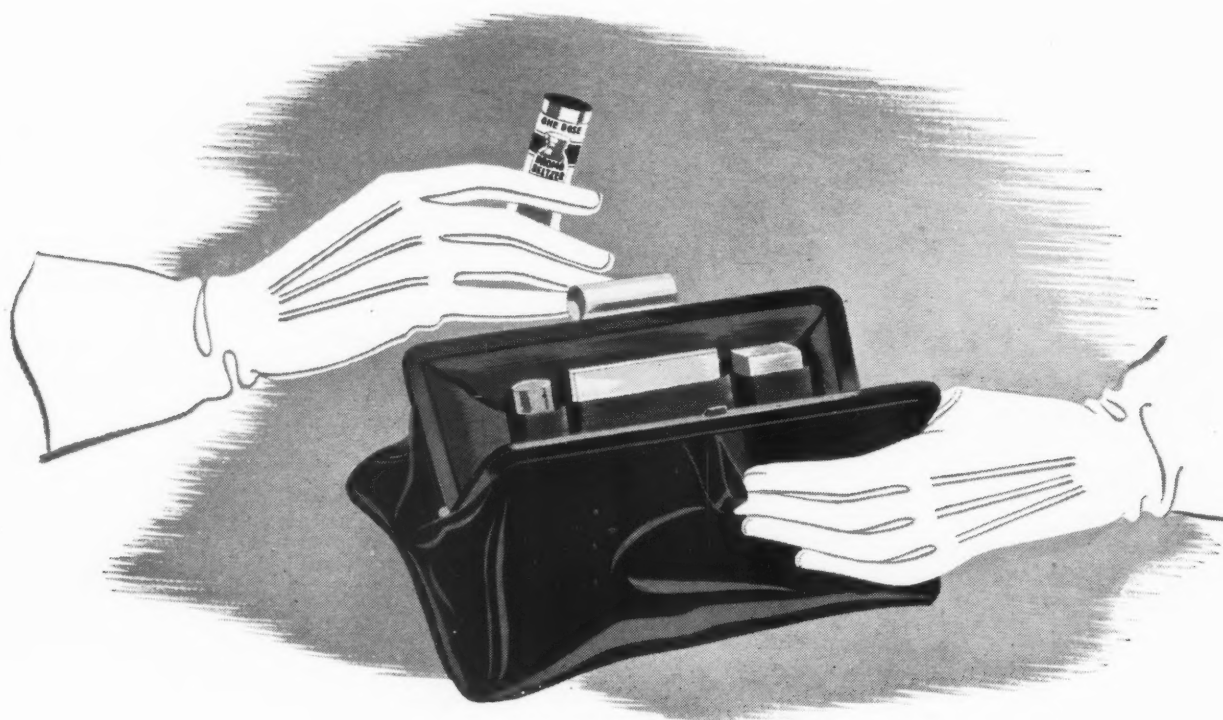
# Creative



In the Cosmetic Field the word *Creative* is synonymous with Distinguished "On The Package" Printing.  
 Colorful-Permanent-Integrated . . . this method has been refined by us to the point where it meets the specific needs of Package Decoration. On all surfaces including glass and plastics.

**Creative**  
**PRINTMAKERS GROUP**  
 200 VARICK STREET, NEW YORK 14, N. Y. - WALKER 5-6300  
 IN CANADA: 2424 Yonge Street, Toronto, Ontario

# Look what cured an old Bromo-Seltzer headache



**E**MERSON DRUG used to have a headache that even their own good product couldn't cure.

They just weren't getting their share of the business from the hand-bag trade. By which we mean that women—and men, too—found the individual Bromo-Seltzer bottles too bulky to carry around for emergency use.

About then, we at Sun Tube had an idea. Why not package Bromo-Seltzer in our convenient, compact, airtight Unitainer, the one-dose collapsible tube?

We did. Emerson liked it and bought. Looks like women liked it, too. To date, they've bought over fifty million tubes!

## Not that this is your headache

This may be closer to *your* packaging problem than you think. Because this story typifies the ingenuity and resourcefulness our packaging engineers can bring to your particular problem.

You probably already know the advantages of the collapsible tube.

That it's virtually unbreakable, that contents won't dry out even after the tube has once been opened. That it's germ-proof and light-proof. That it reduces loss due to leaks.

What you may *not* know, however, is that new developments like this one have made Sun Tube the ideal container for a host of products never before considered prospects for a collapsible tube.

If you would like some help on your own packaging problem, won't you give our nearest representative a call or send him a card today?

## SUN TUBE CORPORATION

*Hillside, New Jersey*

CHICAGO 1, ILL.  
James L. Coffield, Jr.  
360 No. Michigan Avenue

ST. LOUIS 1, MO.  
M. P. Yates  
Arcade Building

ST. PAUL 1, MINN.  
Alexander Seymour  
615 Pioneer Building

LOS ANGELES 27, CALIF.  
R. G. F. Byington  
1260 North Western Ave.

**IN 1946**

**it's**

**WESTERN**

**for distinctive packaging  
materials and unusual  
low pressure  
laminated plastics**



**WESTERN PRODUCTS INCORPORATED**

*Creative Engineering in Packaging and Plastics*

NEWARK, OHIO

**CONVERTERS OF LAMINATED AND COATED METAL FOILS, TRANSPARENT FILMS, FABRICS, AND PAPERS**



## He'll be glad to introduce you . . .

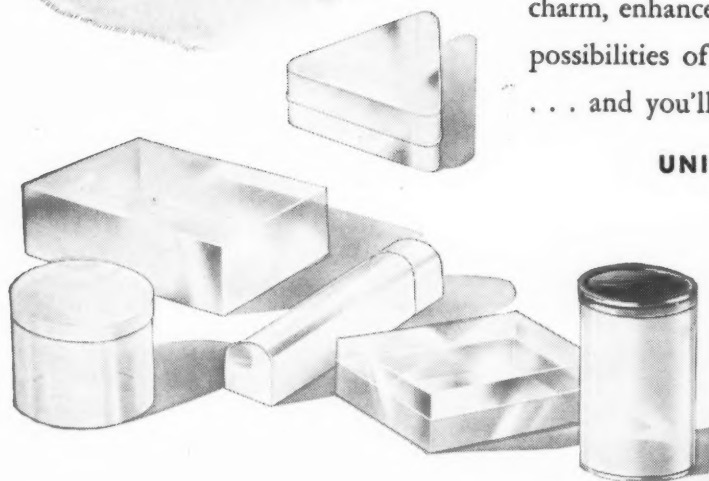
. . . to a complete line of set-up boxes in strong, transparent acetate material.

Kellogg designers are ready to help you emphasize the beauty of your product, protect its cleanliness, insure its freshness and charm, enhance its sales value. Let us tell you about the infinite possibilities of transparent acetate material. The public likes it . . . and you'll like its sales appeal when fashioned by Kellogg.

P-12

**UNITED STATES ENVELOPE COMPANY**

14 Divisions from Coast to Coast



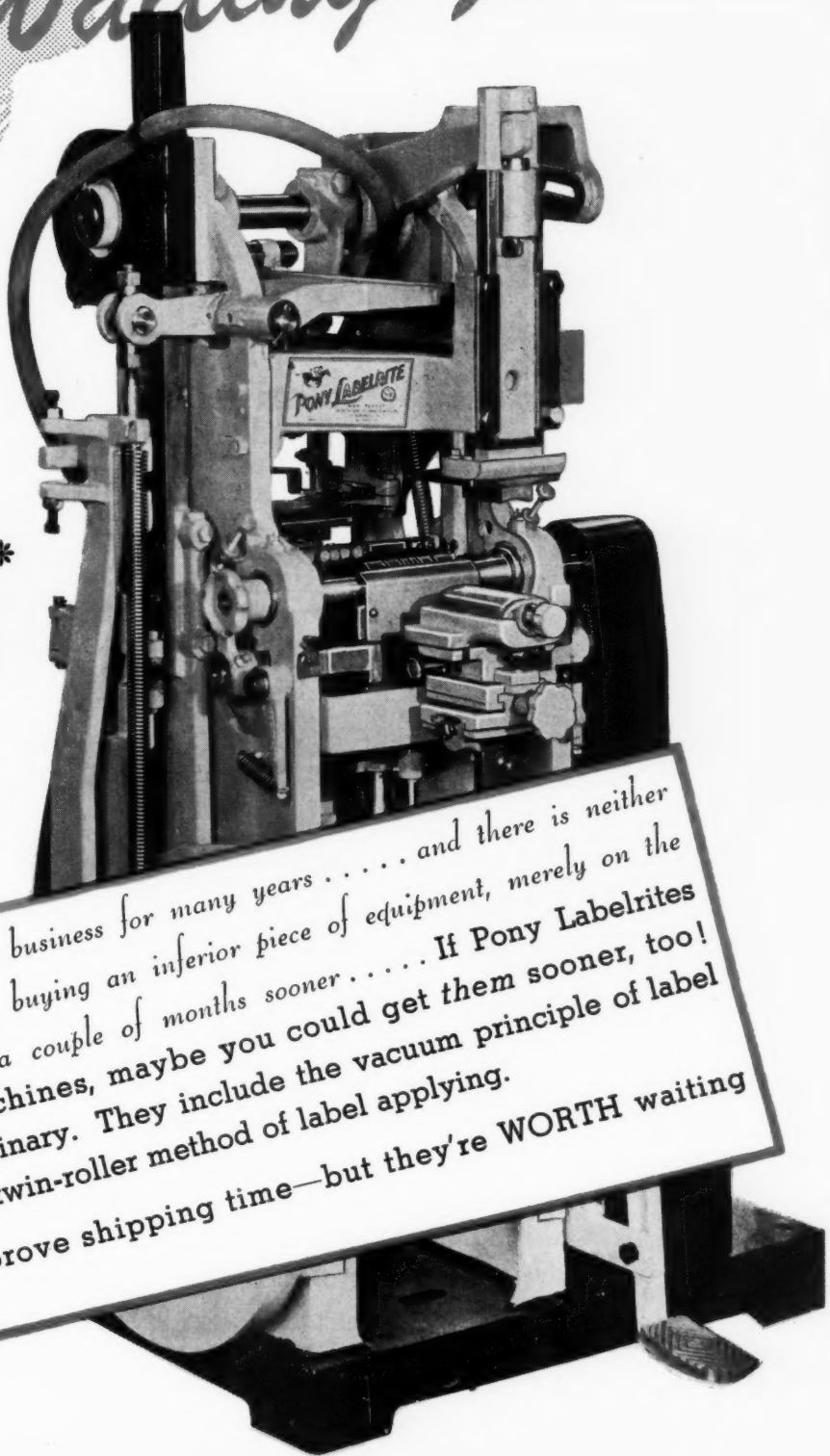
**U.S.E**

PROTECTIVE PACKAGING



*Worth Waiting For--*

# PONY LABELRITE\*



You are going to be in business for many years . . . . and there is neither economy nor wisdom in buying an inferior piece of equipment, merely on the strength of getting it a couple of months sooner . . . . If Pony Labelrites were ordinary machines, maybe you could get them sooner, too! Ponies are not ordinary. They include the vacuum principle of label handling and the twin-roller method of label applying. We hope to improve shipping time—but they're WORTH waiting for anyway!

\* Reg. U. S. Pat. Off.



## NEW JERSEY MACHINE CORPORATION

CHICAGO OFFICE:  
325 WEST HURON STREET

16th ST. & WILLOW AVE., HOBOKEN, N. J.

CINCINNATI OFFICE:  
1701 CAREW TOWER

## UNTIL CONDITIONS CHANGE . . .

. . .Walter P. Miller Company's efforts must be confined to serving established customers . . . with improving quality, as finer grades of stock become available . . . and with the creative ability and manufacturing efficiency which have earned for us a fifty-year-old reputation as "a good house with which to do business."

**WALTER P. MILLER COMPANY, INC.**

CREATORS AND PRODUCERS OF

*Set-up Paper Boxes*

PHILADELPHIA

# metal edge

**A** PLACE FOR KEEPSAKES—a box too attractive to be discarded after its contents have been used! That is the eye appeal of Lumarith plastic! The metal edge box is produced more economically than many other types, and the sales producing power of this container is far beyond what its low cost would indicate. Because of its economy the Lumarith metal edge container is practicable for competitively priced, chain store merchandise: toilet goods, note paper, dress flowers, shaving kits—counter items that the eyes buy. Lumarith transparent film, easy to fabricate, is the ideal packaging material. It is the first thing the customer likes about a product. Celanese Plastics Corporation, a division of Celanese Corporation of America, 180 Madison Avenue, New York 16, N. Y.

\*Reg. U. S. Pat. Off.



".... the last time they "  
Said the nicest things"



**CROWN  
CLOSURES**

And well deserved praise it was, for here's a hostess who has really learned the secret of gracious entertaining. One sure-fire favorite in her bag of tricks is So-li-cious Brand Maraschino Cherries. They're fine as a garnish for ice cream, desserts, salads, and as a topping for cakes. They make drinks more inviting, too. They're so colorful they add gaiety to almost any occasion.

A product of W. O. Sommers, Inc., Chicago, Ill., these party favorites are packed in several sized jars to meet the requirements of most any gathering. Here again, Crown Screw Caps have been selected as the closure. The patented Deep Hook Thread of Crown Screw Caps gives double sealing pressure with the same amount of application force. Crown Cork & Seal Company, Baltimore 3, Maryland. *World's largest makers of metal closures.*

**"Packages—Your  
Packages—will  
be increasingly  
examined and  
discussed by  
the Public!"**

Quoted from official bulletin sent to  
members of Grocery Manufacturers of  
America, Inc., by Paul S. Willis, President



**Paul S. Willis**

President of Grocery Manufacturers of America, Inc.

*Pointing*

## THE IMPORTANCE OF PERIODICAL REVIEW OF YOUR PACKAGING!

*Traver* experts will do the job for you—without obligation. Our staff of engineers, technicians, and sales-minded designers will give you our recommendations on product protection and display; descriptive information; and the last word in packaging sales-punch!

CONVERTORS OF  
CELLOPHANE,  
GLASSINE, FOILS  
and PROTECTIVE  
PAPERS!

All you need do is send your  
Present Package to us in care of Dept. MP1-46



358-368 West Ontario St., Chicago 10, Illinois  
Offices in Principal Cities—Reply to Chicago

PACKAGING THAT SELLS!



**Plastic Films that *Perform*—  
in Scores of Vital Jobs**

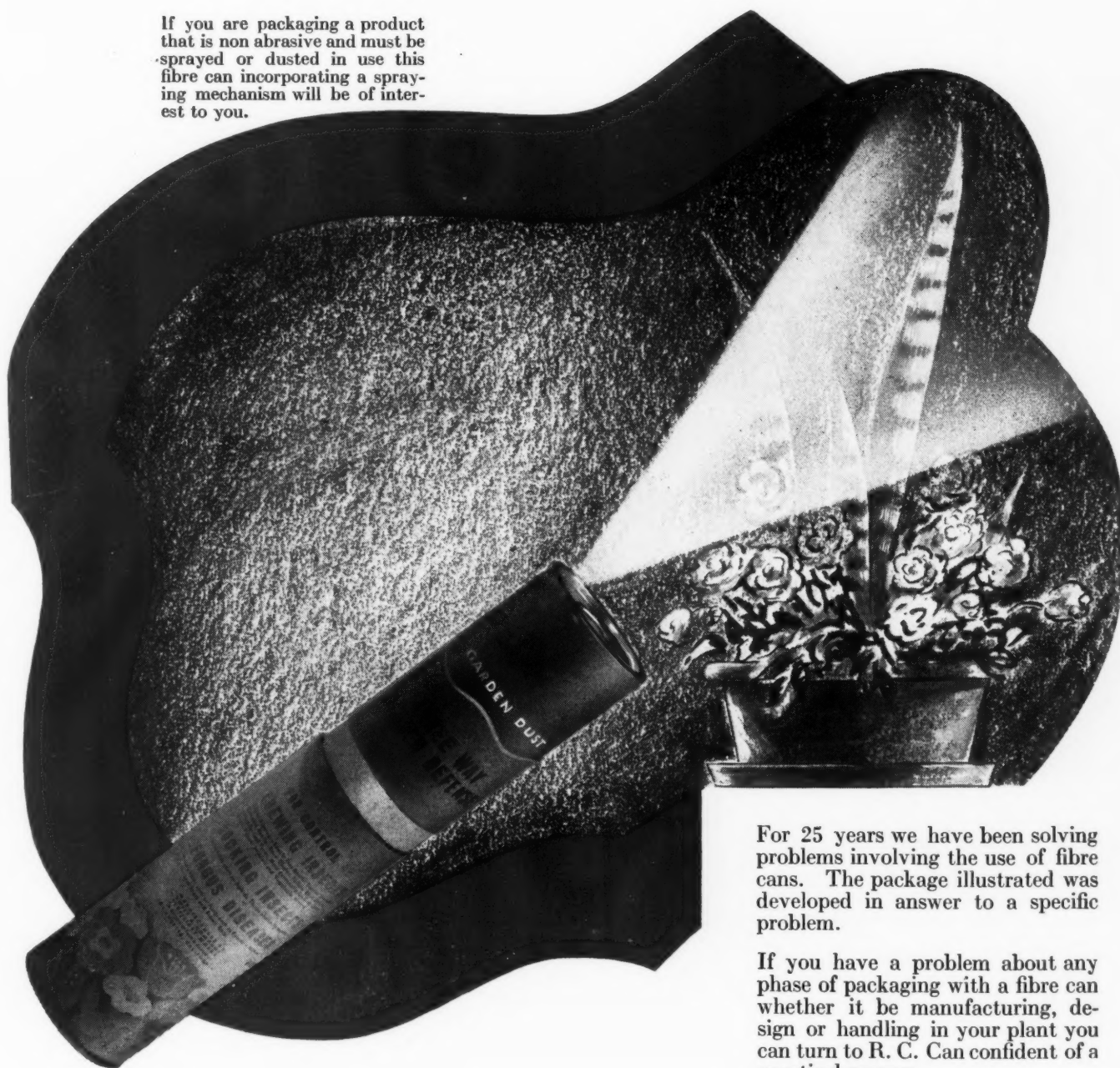
NEW YORK OFFICE:  
475 FIFTH AVENUE  
NEW YORK 17, N.Y.

PLANT AT:  
PLAINFIELD,  
CONNECTICUT

# A PERFECT PACKAGE

## FOR NON ABRASIVE POWDERS

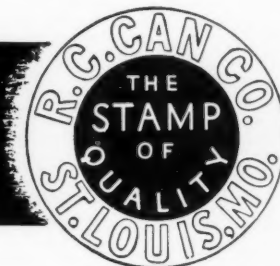
If you are packaging a product that is non abrasive and must be sprayed or dusted in use this fibre can incorporating a spraying mechanism will be of interest to you.



For 25 years we have been solving problems involving the use of fibre cans. The package illustrated was developed in answer to a specific problem.

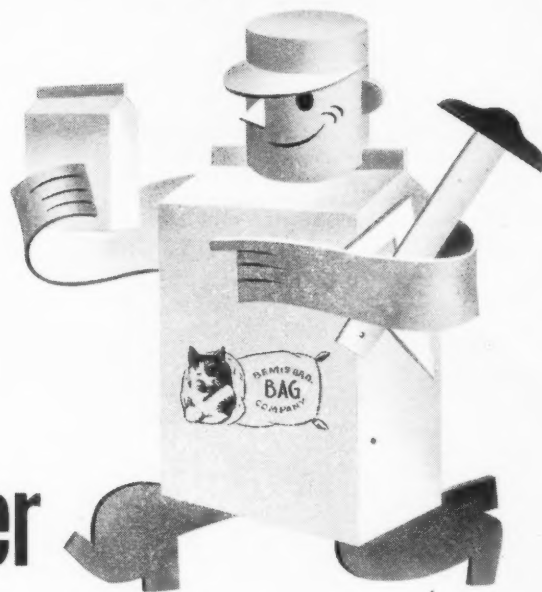
If you have a problem about any phase of packaging with a fibre can whether it be manufacturing, design or handling in your plant you can turn to R. C. Can confident of a practical answer.

**R.C. CAN COMPANY**  
Manufacturers of fibre cans, tubes, spools and cores  
Head Office: St. Louis, Mo.  
Branch Factories: Arlington, Texas; Rittman, Ohio; and Kansas City, Mo.  
Sales Offices: Minneapolis, New Orleans, Atlanta, Memphis, Milwaukee,  
Louisville, New York, Pittsburgh, Denver and Los Angeles.



\* Patented R. C. Can Co.

if you now  
wrap your  
product in paper

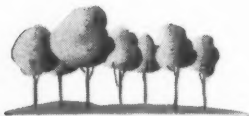


## A bag may do your job better at lower cost

Yes, if you now wrap your product in paper, you may be wasting valuable time, material and labor in your packaging department that could be saved if you used *special paper bags*. The Bemis

Paper Bag Specialty Division is giving manufacturers important savings by developing bags and methods of packing a wide range of products formerly hand-wrapped in paper.

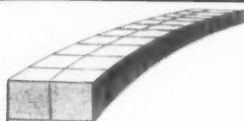
### TREES • CANS • FIREBRICK AND PERHAPS YOUR PRODUCT



A waterproof paper bag saves time, materials and labor in wrapping trees. Trees ready for shipment are usually wrapped in paper. Now they may be slipped into special paper bags supplied by Bemis. Time and labor is saved, and the bag makes a better looking package.



4' x 12' sheets of wallboard are usually wrapped in heavy paper. A large paper bag has been designed to hold six sheets. This gives savings in labor and materials; frees valuable floor space in the packing department.



100-pound cubes of firebrick clay are unwieldy and hard to wrap in paper. A special paper bag speeds up handling and provides a more efficient protective covering.

### SUBMIT YOUR PACKAGING PROBLEMS TO BEMIS

No matter what type or size of product you make, if you now hand-wrap in paper you may find new packaging economy in a *special paper bag*. Call Bemis today. There is no obligation.

### BEMIS BRO. BAG CO.



### PAPER BAG SPECIALITY DIVISION

1058 S. Vandeventer  
St. Louis, Missouri

## What are You Laminating?

PAPER TO  
GLASSINE?

GLASSINE  
TO GLASSINE?

PAPERBOARD  
TO GREASEPROOF  
PARCHMENT?

PAPER TO  
METAL FOIL?

PAPERBOARD  
TO GLASSINE?

● No matter what combinations you're making for what ultimate use . . . you'll find that S/V Product 2305, gives you both an adhesive *binder* and an efficient *barrier* to moisture and moisture-vapor.

Moreover, you'll also find that this outstanding hydrocarbon wax is easy to apply and economical to use. It stays flexible at low temperatures,

a factor that is important in making laminations for frozen foods, medicines and other perishables.

• S/V Product 2305, is available now in volume to help meet your most exacting laminating needs. Your Socony-Vacuum Representative will give you performance facts and figures and help you with the technical problems that will guarantee correct application.



INVESTIGATE  
**SOCONY-VACUUM  
PROCESS PRODUCTS**

Research and Service

## What's New in Petroleum for PACKAGING!

### FROZEN FOODS

#### S/V Microcrystalline Waxes

Impart flexible moistureproof coatings.

★

### DEHYDRATED FOODS

#### S/V Microcrystalline Waxes

When used as coatings, keep contents dry.

★

### CONTAINER LININGS

#### S/V Microcrystalline Waxes

Protect interiors of barrels, drums, tank cars.

★

### BEER CANS

#### S/V Petrosenes

Give flexible inert linings.

★

### HEAT-SEALING

#### Special Waxes

Produce tough, tenacious seals on paper.

★

### EXPLOSIVES

#### S/V Waxes, Petrolatums

Waterproof and seal dynamite sticks.

★

### HYDROFLUORIC ACID

#### S/V Ceres Waxes

Add strength to waxes used for containers.

★

### RUST PREVENTIVES

#### S/V Sova Kotes

Keep metals from rusting in storage.

**SOCONY-VACUUM OIL CO., INC.**  
26 Broadway, New York 4, N. Y.,  
and Affiliates: Magnolia Petroleum  
Company, General Petroleum  
Corporation of California.

Tune in "Information Please"  
Monday Evenings, 9:30 E.S.T.—NBC

# What you should know about our big new radio show

## It's "Celebrity Club"!

A half-hour show, "Continental Celebrity Club" has *everything*... a famous songstress, a top-notch comedian, genial host John Daly, a galaxy of guest stars, Ray Block and his orchestra, and a stirring dramatization of "the story behind the star." It's big-time!

## Millions Listen!

Rating reports tell us millions of folks tuned in every week last year to our "Report to the Nation." Our exciting new show—on at the same time—is expected to become even *more* popular!

## Folks Love It!

"Wonderful!" "Exciting!" "Entertaining!" say the fan letters that pour into Continental's offices daily. And—remember—a friend of ours is a friend of yours!



## Coast to Coast!

147 stations on the Columbia Broadcasting Company's far-flung national network. Reaches into every nook and cranny of the great mass market that is America.

## Famous Celebrities!

Stars of stage, screen and radio, as well as colorful, prominent personalities from other walks of life, are featured on every program... a big reason why Continental Celebrity Club draws so many listeners!

## Sells for You!

Hard-selling (but easy-to-listen-to) commercials tell the American buying public the value of your products. It's your show as much as ours!

### REMEMBER CONTINENTAL!

**The only can company on the air**

**Continental's big radio show** is doing a big job for you. Keep your eye on Continental and on our Triple C—the trade mark that stands for the best in quality, best in service.

**Tune in!**

**"CONTINENTAL  
CELEBRITY CLUB"**

(SAT. AT 10:15 EST OVER CBS)

**It's for you!**

CONTINENTAL  CAN COMPANY

100 East 42nd Street, New York 17, New York

# MAKING SALES FOR *Chenay*



DISTRIBUTED EXCLUSIVELY BY H. B. W. SNELLING CO., BOSTON

Easy to see means easy to sell; so Chenay Perfumes (by H. B. W. Snelling of Boston) go into Shaw-Randall's visible, salable acetate display packages.

The twelve bottle easel display invites 3-unit sales . . . shredded cellophane is added for Chenay's protection and appearance . . . a typical Shaw-Randall builder-up for any product's selling power.

*Our wartime experience and greatly expanded facilities  
are ready for your post war packaging plans*

## SHAW-RANDALL COMPANY

A DIVISION OF

**SHAW PAPER BOX COMPANY**

PAWTUCKET • RHODE ISLAND

New York Sales Representative

Fred Mann & Company • 545 Fifth Avenue

# Containers of DISTINCTION



QUALITY PRODUCTS

Deserve **Clearsite** Containers

PRICE-PRODUCTS NEED THEM

SEAMLESS  
COLORFUL  
FEATHERLITE  
*Shatterproof*  
IMPRINTED DURING  
MANUFACTURING PROCESS

Your customers will regard the merits of your product even more, because taste and discernment are expressed in the lustrous beauty and shatterproof protection of **Clearsite** vials—made with a "Safety Base"! They make a better impression because they ARE better!

Ask to see Samples . . .

\*Reg. U. S. Patent Office



## CELLUPLASTIC CORPORATION

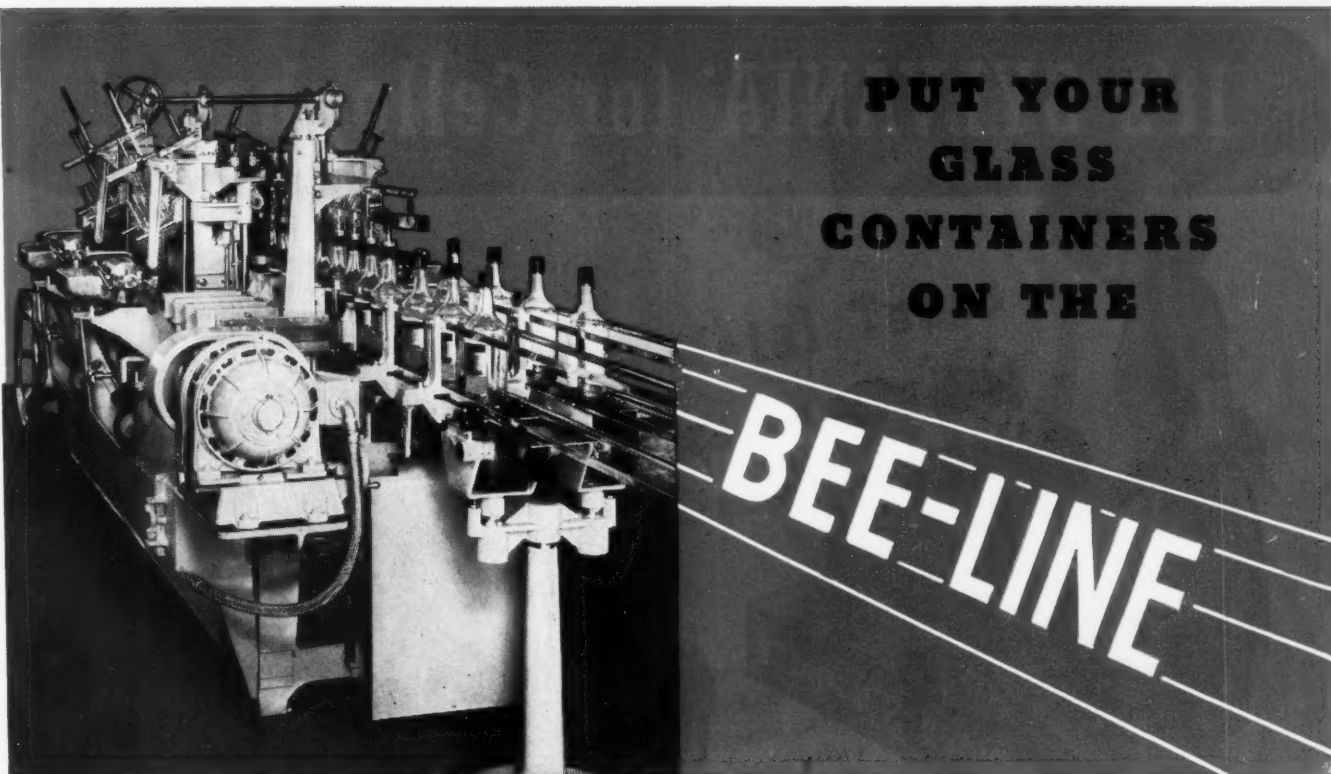
PLASTIC CONTAINERS  
AND  
PLASTIC PRODUCTS

40 AVENUE L

NEWARK 5, N. J.

NEW YORK OFFICE—630 FIFTH AVENUE

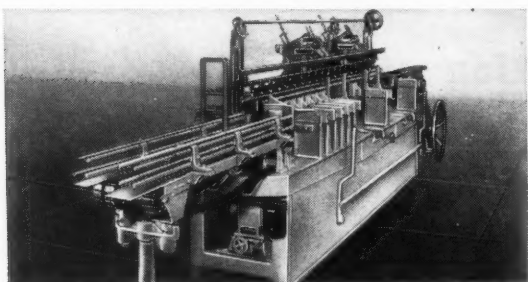
WEST COAST: CONTAINER SERVICE COMPANY, LOS ANGELES 27, CAL.



For express service via the shortest distance between two points, put your bottles or jars aboard the BEE-LINE. The WORLD BEE-LINE Labeler conducts round, square, flat, oval or panel-shaped containers (it's ideal for the modern light weight glass) steadily, surely and gently—no shuttling, detour-

ing or colliding—through the complete labeling operation: front labels, front and back labels, neck labels, if you wish. Once they start on their way through the BEE-LINE you can be sure their finished appearance will be worthy of your product.

Get in touch with our nearest office. You can be sure of unbiased recommendations for there is a type and size of WORLD Labeler to fit every container, label and production requirement.



This is the BEE-LINE with twin labeling stations to handle two bottles simultaneously at the same efficient labeling speed as the single station Labeler. The Model HG BEE-LINE does equally fine work on gallon and half-gallon jugs and bottles.



**"YOU GET THE  
BEST LABELERS  
IN THE WORLD"**

## ECONOMIC MACHINERY COMPANY

*Builders of World Automatic and Semi-Automatic Labelers for Every Purpose*

**WORCESTER, MASSACHUSETTS**

New York	Philadelphia	Pittsburgh	Chicago	San Francisco	Denver
Louisville	Salt Lake City	El Paso	Seattle	Portland	Phoenix
Montreal	Toronto	Winnipeg	Spokane	Vancouver	Mexico City
Sydney, Australia	Wellington, N.Z.	San Juan, P.R.	Ciudad, Trujillo, D.R.		

# It's SYLVANIA for Cellophane!

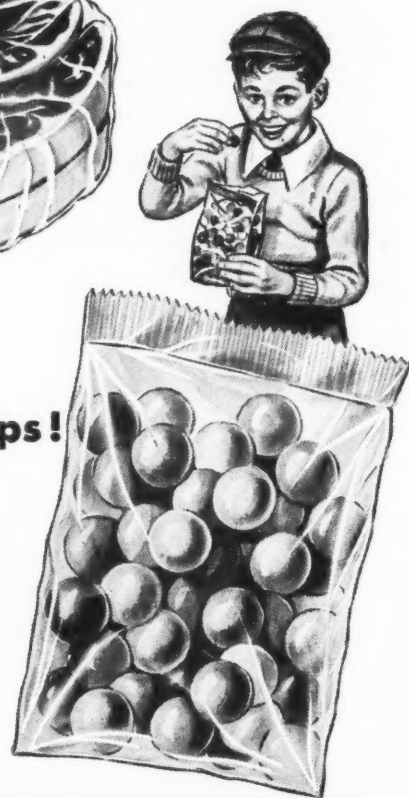


**to protect cookies**

**and chops**



**and  
lemon drops!**



Versatile Sylvania Cellophane protects all three—and many more! This shimmering wrap combines beauty with outstanding functional qualities. It protects against air, dust and moisture . . . seals flavor and freshness in.

Sylvania Cellophane today looks and protects better than ever before. Soon even larger quantities of this indispensable packaging material will be available for every requirement.

## SYLVANIA CELLOPHANE

Made only by **SYLVANIA INDUSTRIAL** Corporation

*Manufacturers of cellophane and other cellulose products since 1929*

*General Sales Office: 122 E. 42nd St., New York 17, N.Y. ★ Plant and Principal Office: Fredericksburg, Va.*



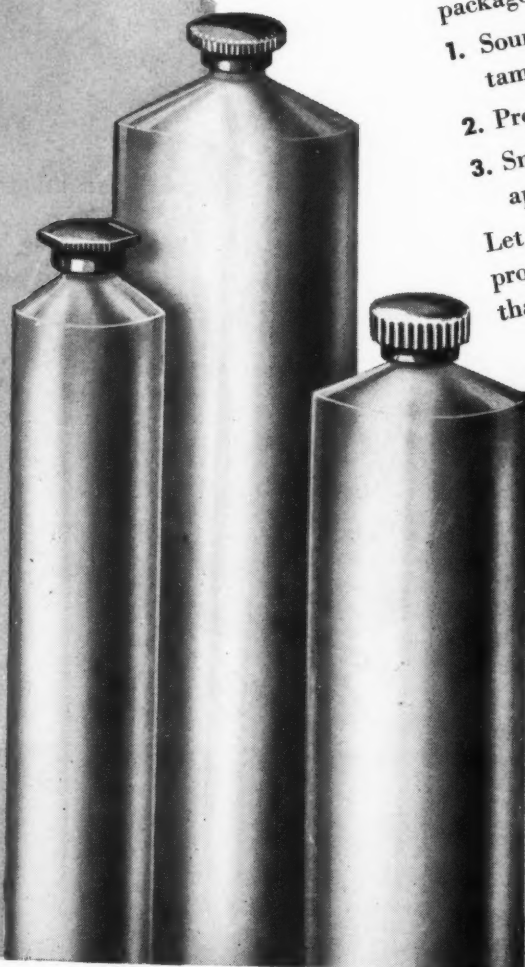
**WIRZ Collapsible Metal Tubes**  
*match your markets' demands*  
 for attractive, protected, convenient  
 packages . . .

The highly competitive markets ahead make an attractive, well-protected, convenient package imperative . . . especially if your product is a liquid, cream, paste or powder. You can be sure your package embodies all these advantages if it is a WIRZ Collapsible Metal Tube.

WIRZ Collapsible Metal Tubes are protection-convenience packages. They are carefully designed with—

1. Sound, even walls to keep your product free from contamination, atmospheric action, damage in transit and use.
2. Proper self-dispensing shape for convenience and economy.
3. Smooth, even finish, takes colorful inks to enhance the appeal of your product and make it easy to remember.

Let us help you plan a package that increases eye-appeal, protects your product and adds convenience . . . a package that matches your markets' demands.



**A. H. WIRZ, INC.**

Established 1836 . . . . . Fourth & Cole Streets  
**CHESTER, PA.**

Export Division—751 Drexel Building, Philadelphia 6, Pa.  
 NEW YORK 17, N. Y. CHICAGO 4, ILL. MEMPHIS 2, TENN.  
 50 E. 42nd St. 80 E. Jackson Blvd. Wurzburg Bros.  
 HAVANA, CUBA 1709 W. 8th St., LOS ANGELES 14, CALIF.  
 Roberto Ortiz Planos and DANVILLE, CALIF.

Collapsible Metal Tubes • Lacquer Linings • Wax Linings  
 • Westite Closures • Soft Metal Tubing • Household  
 Can Spouts • Applicator Pipes • Compression Molding



The idea that the boy with a bent pin catches the most fish, went out years ago. Today the expert ties his own lures to suit the exact conditions under which he plans to "do business"...and he usually gets results. Packaging is like that. Successful packaging of a single product may require a combination of several different materials...perhaps little known or never used for that specific product before.

To meet this need, Riegel offers the accumulated knowledge of years of experience in making special papers, physically demonstrated by Riegel's sample file of over 600 different grades, ranging from a 16 lb. Glassine to a 400 lb. Pattern Paper.

The boy with the bent pin will always do some business...but if packaging is a highly competitive factor in your field, it will save time and money to see how Riegel can help you.

## 600 RIEGEL Papers

*Riegel packaging papers include glassine, greaseproof, sulphite, wet-strength . . . printed, embossed, resin-impregnated, laminated, oiled, lacquer-coated, waxed, dry-waxed . . . as well as printing papers, converting papers and special industrial papers in endless variety.*

**RIEGEL PAPER CORPORATION • 342 MADISON AVENUE • NEW YORK 17, NEW YORK**

# KIMBLE NEUTRAGLAS CONTAINERS

*Ampuls...Vials...Serum Bottles*



The complete container line for parenteral solutions—ampuls, vials, and serum bottles in a wide range of types and sizes, made of Neutraglas for utmost protection and resistance to chemical attack.

• • • *The Visible Guarantee of Invisible Quality* • • •

KIMBLE GLASS COMPANY, INC., NEW YORK, N. Y.

NEW YORK • CHICAGO • PHILADELPHIA • PITTSBURGH • ST. LOUIS • SAN FRANCISCO

# JONES cartoned candy means...

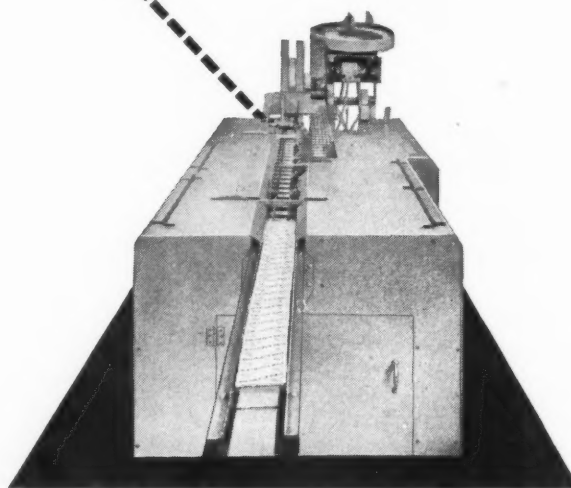


Here is a new Jones Cartoner—made to substantially reduce the candy manufacturers' packaging costs.

What R. A. Jones & Company has brought to the cartoning of bottles, jars, and other cartoned products, it is now bringing to the cartoning of candy mints. The new Constant Motion, straight-line mint feed of this machine enables you to load 150 or more cartons per minute without strain on the cartoner or damage to the mints. The John T. Troll Co., of Los Angeles, has installed four of these new cartoners and is extremely enthusiastic over their performance.

Today's watchword with every producer—whether he manufactures motor cars or candy—is Reduce Production Costs. Write today for full information on how the Jones Constant Motion Cartoner will give you lower costs—higher profits.

Here is a carton of Troll Peppermints—with mints properly arranged in two rows of six mints each. Cartoned candy is the confectioner's newest and best remedy for high production costs.



This new Jones Constant Motion Cartoner automatically sorts the mints from a revolving hopper; counts them; feeds them from chutes into conveyor buckets; feeds a flat carton from the magazine; opens carton; inserts mints gradually; checks the count; closes and tucks carton flaps.



## R. A. JONES & COMPANY, INC.

P. O. Box 485

CINCINNATI, OHIO

# THE BETTER TAPE

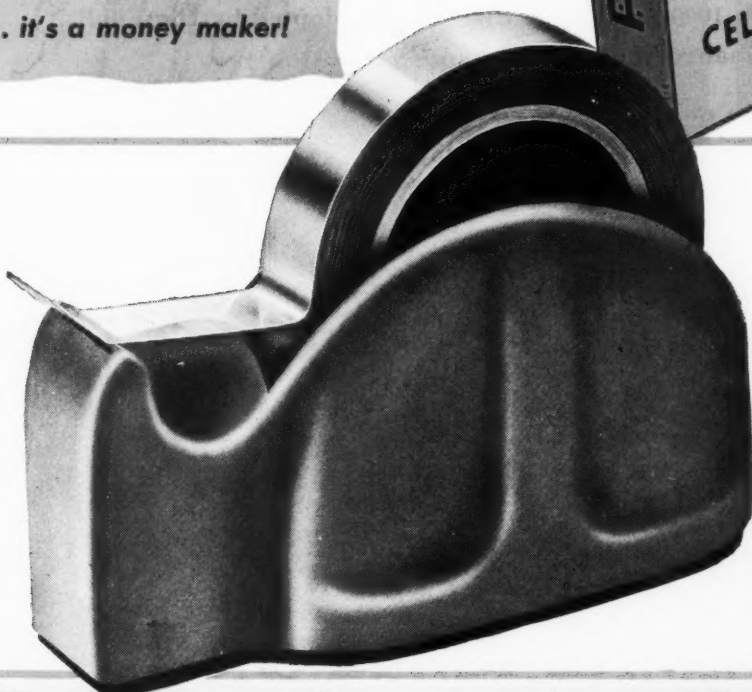
## *Earns you* GREATER PROFITS

Jobbers and retailers hail the new discount setup on PAX TAPE as the most important news in the tape industry.

The new PAX discount is straight, simple to figure and allows the trade its *best profit on pressure sensitive tape sales.*

PAX *better* discount insures bigger profits—  
PAX *better* tape makes satisfied customers—  
PAX unconditional money-back quality GUARANTEE protects everyone — jobber, dealer and consumer.

Send for the facts about the  
**PAX BIG "66" DEAL**  
... it's a money maker!



### PAX DISPENSERS Heavy Duty and Desk Type

Here's the new,  
modern, streamlined  
PAX Dispensers—designed  
for speed, efficiency,  
sturdiness and  
eye-appeal.

**THE COFAX CORPORATION • Lynbrook, N. Y.**



# From "Easterlings" to Sterling £

In the 12th Century, during the reign of Richard I, a small band of traders used to cross the rough and stormy channel from Europe's mainland to Britain. They came from the eastern part of Germany; hence were called "Easterlings." They exchanged large silver "tokens" (or coins) for the goods they wanted. These silver tokens became noted for their purity and uniform high standard — 925 parts of pure silver to each 1000 parts — and were soon adopted by the English as a regular medium of exchange in commerce.

Such was the earliest origin of the English pound sterling. Through the years the "Easterlings tokens" was contracted into the name "Sterling" . . . the word that represents the highest standard of excellence in silver today.

In the field of glass containers, the name Carr-Lowrey has similar significance. It has become a hall mark for buyers who recognize and appreciate quality in commercial glass.

**CARR-LOWREY  
GLASS CO.**

Factory and Main Office: BALTIMORE, MD. • New York Office: 500 Fifth Avenue • Chicago Office: 1502 Merchandise Mart

**GET OFF TO A GOOD START**



# HEEKIN CANS

**ANY SHAPE • ANY SIZE • ANY COLOR • ANY QUANTITY**

**THE HEEKIN CAN CO., CINCINNATI 2, OHIO**



**FIBRE TUBES** . . . These modern packages came of age due to wartime shortages. They will be called upon to contain a variety of materials, and **UPACO ADHESIVES** will help give you the wide range of qualities needed to meet this demand.

GLU-WELD WATER-RESISTANT ADHESIVES • FLEXIBLE GLUES • STRIPPING GLUES • TRANSPARENT FILM ADHESIVES • FOLDING BOX ADHESIVES



**UNION PASTE COMPANY**

QUALITY ADHESIVES SINCE 1866

1605 HYDE PARK AVENUE • HYDE PARK, MASS.



CASE, BAG AND CARTON SEALING GLUES • LABELLING ADHESIVES • LAMINATING ADHESIVES FOR FILMS, PAPERS AND CLOTHS



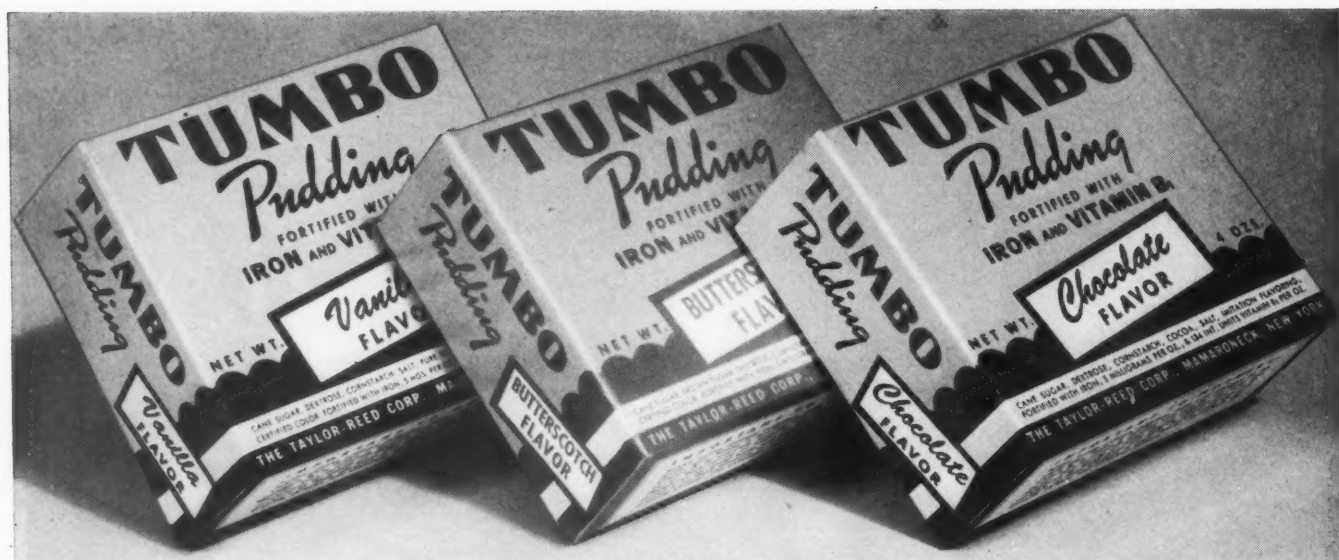
*for perfect reception . . .*

*F*or perfect reception, over a quarter of a million radio sets depend upon one mail order house for tubes and minor radio repair parts. For better shipping, quicker shipping . . . safe shipping, this concern depends upon the perfect direct mailer — the Mason MailMaster.

Its patented wire closure, sturdy construction, attractive wrapper and a host of standard sizes, make it a dependable, economical package. For perfect reception depend upon Mason MailMasters. Write Department (10), The Mason Box Company, Attleboro Falls, Mass., 175 Fifth Ave., New York.

*The* **MASON BOX COMPANY**

MANUFACTURERS OF AMERICA'S NUMBER ONE BOX . . . THE MASON MAILMASTER



## Phenomenal demand for Tumbo Puddings met with

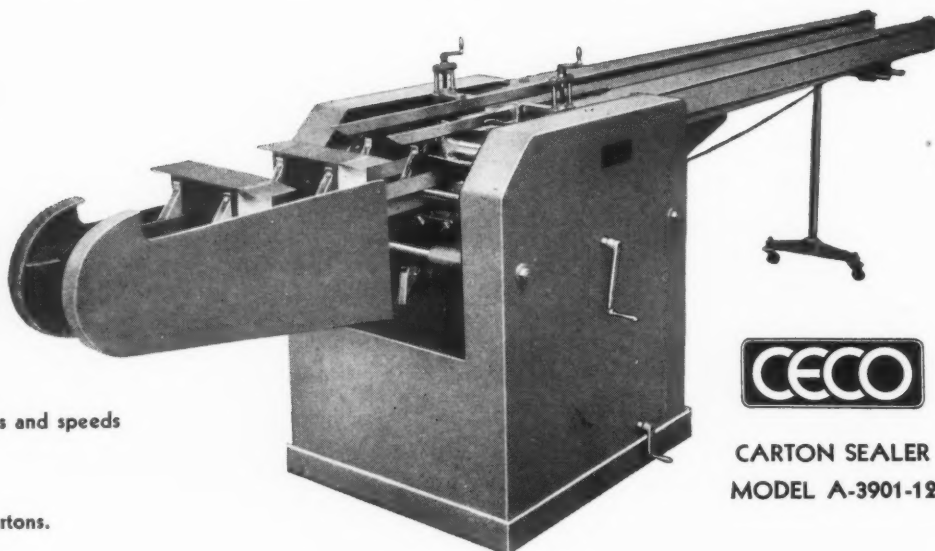


### Adjustable CARTON SEALER

- ★ Adjustable instantly for different sizes and speeds without tools.
- ★ Seals both ends simultaneously.
- ★ Produces square, neat, tamperproof cartons.
- ★ Portable, self-contained.
- ★ Automatic carton feed available.



*Packaging Machinery  
Specialists*



CARTON SEALER  
MODEL A-3901-12

CECO Adjustable Carton Sealers have enabled The Taylor Reed Corporation to meet the phenomenal demand for its Tumbo Puddings. CECO Sealers are giving dependable service turning out millions of clean, neat, square packages at economical cost. Mr. Charles M. D. Reed writes,

*"Our CECO Sealers have proved to be most satisfactory. We have had the newest one running as high as 110 a minute although normally we run it around 90 a minute. Since we purchased them, they have turned out a good many million packages of Tumbo Pudding. We plan to set one of them up to handle a larger package and feel confident that results will be more than satisfactory."*

You, too, can secure better packages faster and at less cost with a simple, inexpensive CECO Adjustable Carton Sealer. Write for details.

214 RIVERSIDE AVE., NEWARK 4, N. J.  
CHICAGO • TORONTO • BALTIMORE • ST. LOUIS  
SAN FRANCISCO • ROCHESTER

# you'll find **SYNTRON** coated packages

## on more and more shelves

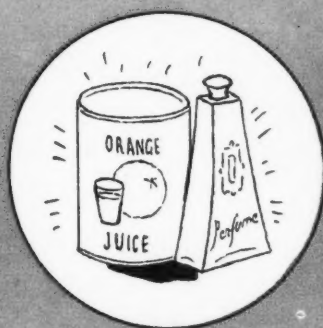
## doing a better job

### MOISTURE VAPOR PROOF HEAT-SEAL COATINGS



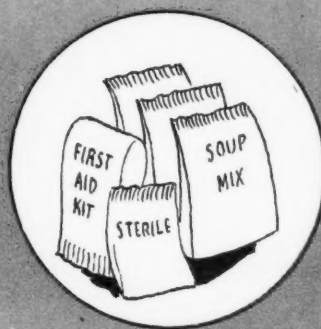
The ideal coating for all types of paper bags and packages, including glassine. It is non-toxic, odorless, oil and grease resistant. 1 to 5 grams moisture vapor per 24 hours per square meter. Block—above 135° fahrenheit under 1 lb. pressure per square inch. Always keeps products "factory-fresh" by setting up a barrier against atmospheric conditions, and because it has the added protective property of heat-sealing.

### HIGH GLOSS COATINGS



The protective coating that gives a very high gloss to all kinds of papers. Eliminates the need for laminated cellophane or for wrapping packages in cellophane to give them protection and sparkling attractiveness. Also (1) Alcohol proof; (2) Grease, Oil, Alkali and Acid resistant; and (3) Heat-Sealable. Its excellence and dependability are attested to by its use on many nationally known products such as perfumes, cosmetics, foods, etc.

### ALUMINUM HEAT-SEAL COATINGS



Especially developed to give maximum sealing strength for all types of aluminum foil bags and packages. It gives this maximum amount of moisture protection because it actually sets up a solid barrier between the contents and the attacking atmosphere. Waterproof, non-toxic, colorless, odorless, oil, acid, alcohol and alkali resistant. Block—above 135° fahrenheit under 1 lb. pressure per square inch.

## what is your coating problem?

Gordon-Lacey's research laboratory is exclusively engaged, in the development of new coatings to meet your individual needs.

The three coatings above were developed in these laboratories to fulfill special needs growing out of individual problems.

We can do the same for you. New **SYNTRON** coatings can be developed for application to porous and non-porous surfaces such as fabric, paper, wood, plastic, metal . . . to impart qualities such as moisture vapor proof protection, resistance to grease and oil, to acid, alkali and chemicals, heat-sealing, toughness, durability, flexibility, abrasion-resistance, etc.

Write for full information concerning your coating problem.

## GORDON-LACEY CHEMICAL PRODUCTS CO.

57-02 48th STREET • MASPETH, NEW YORK



JANUARY • 1946

65



**TAILOR-MADE**

*Bags*

**to meet your  
product requirements**



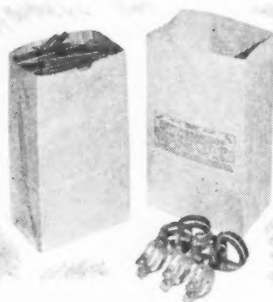
**CHEMICAL BAGS**



**REFUSE DISPOSAL BAGS**



**INDUSTRIAL PARTS BAG**



**HARDWARE BAGS**



**LAUNDRY SHIRT BAGS**



**TOOL PROTECTION BAGS**

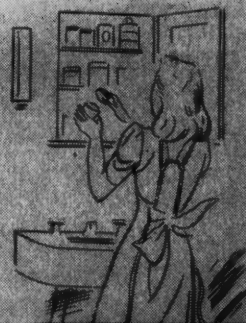
**THILCO** *Functional*

**THILMANY**  
PULP & PAPER COMPANY  
KAUKAUNA • WISCONSIN

**PAPERS**



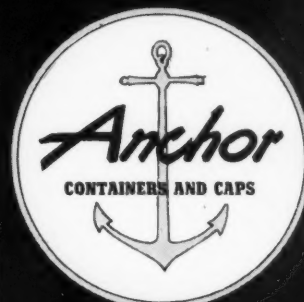
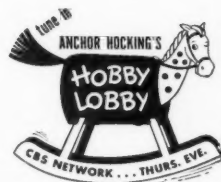
**WHEN IT'S EASY TO OPEN  
SHE'LL USE IT MORE OFTEN!**



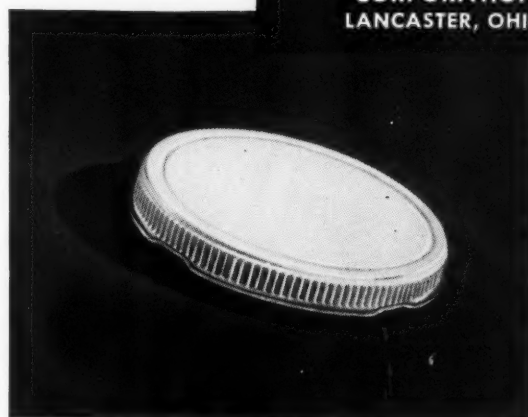
. . . And that's a sound formula for more repeat sales. For easy access to contents encourages more frequent use of the product. Anchor Amerseal Caps were developed with feminine fingers in mind. They remove and reseal with an easy, simple quarter-turn.

Not only are Anchor Amerseals the easiest closures to remove; they reseal as effectively the hundredth time as the first. Anchor Amerseal Caps never stick, gum or freeze to the container finish because they employ lugs rather than threads to effect the seal and these make contact only at the points where each engages the underside of the glass threads.

Regardless of the nature of your products, you can depend on Anchor Amerseals to provide perfect airtight, leakproof seals and to create goodwill and repeat sales for the products entrusted to them.



PRODUCTS OF  
**ANCHOR HOCKING GLASS  
CORPORATION**  
LANCASTER, OHIO





## A Good Package attracts attention!

There are two qualities in a Royal FLAV-O-TAINER package that make it stand out from the rest. One is *unusual eye-appeal*, particularly true when it has been created by Royal designers. The other is *unusual protection*, particularly important with a perishable product. FLAV-O-TAINER is a patented duplex bag, heat-sealed on all seams, that protects the contents from the destructive effects of air, moisture, grease, and odors.



We are making FLAV-O-TAINERS lined with Pliofilm, Cellophane and Dioflex *now* (Dioflex is moisture-proof coated glassine laminated to itself).

Other Royalflex films such as Selloflex (Cellophane laminated to itself or to other material) Lumiflex (aluminum foil laminated to other material), and Plioflex (Pliofilm laminated to itself or to other material) will be available soon.



THOMAS M.

**ROYAL**

& COMPANY • Philadelphia 20

BOSTON • CHICAGO • SAN FRANCISCO • BEAUMONT • ATLANTA • PITTSBURGH • NEW ORLEANS  
DENVER • SEATTLE • NEW YORK • ST. LOUIS • DAYTON • DETROIT • SYRACUSE • BRYN MAWR

# GUARANTEE OF RELIABILITY



This WYETH signature is a guarantee of reliability and an assurance of satisfaction. It is recognized as such by users of WYETH products; and is being kept constantly in their sight and minds at points of purchase, and points of use, on display and advertising material produced by FORBES. This is sound merchandising practice, especially in these times of such radical shifts of population and buying power. Let us help YOU maintain the recognition value of YOUR trade name or trade-mark right where your products are for sale.



**FORBES**  
NEW YORK CLEVELAND LITHOGRAPH CO. P. O. Box 513 Boston 2  
CHICAGO ROCHESTER

FOR ALL TYPES OF PACKAGE MACHINERY

## 3 IN 1 ELECTRONIC

### PRECISION CONTROL OF REGISTRATION

A small, rugged, compact, one-piece, triple scanner easy to install, which will regulate cutting of printed paper, cloth, cellophane, tinfoil and similar materials of any color, or combination of colors with precise relation to position of printed matter.

A turn of a switch gives:

- (1) Transmitted light for use with transparent material.
- (2) Reflected light for use with opaque material.
- (3) Both transmitted and reflected lights for use with translucent material.

Color variety is no problem. A set of internal color filters eliminates the need for a synchronous selector for use where registration mark is a color contrast in the printed design.

Amplifier can be installed anywhere within 25 feet of scanner. Includes heavy duty relay rated at 30 amps. 110 v. inductive load and 50 amps. 110 v. non-inductive load contained in a sturdy steel housing. As is customary with all of our controls, a large safety factor is incorporated in all components. Made for 110 v. and 220 v.

Write for Catalog #8231



SCANNER MODEL No. 8232  
Approximate size: 7½" x 4" x 3¼"



AMPLIFIER MODEL No. 8233  
Approximate size: 10¾" x 8¼" x 5¼"

---

## UNITED CINEPHONE CORPORATION

*Designers, Engineers and Manufacturers of Electronic Products*

10 NEW LITCHFIELD STREET

TORRINGTON, CONNECTICUT

---

**CARTONS  
THAT SPEAK OF QUALITY AND  
VALUE!**



Your carton must do a selling job today. On dealers' shelves and counters it must speak of quality and value if it is to move at the moment of decision. That's why your product should be packaged in A.C.M. Clay Coated Cartons. A.C.M. is the world's finest, most uniform Clay Coated Board. Made by an exclusive, continuous process, with a pure white, velvet-smooth surface that gives lustre, brilliance and perfect reproduction to any design in either letterpress or lithography.

**WHY A.C.M. CARTONS ARE BEST:**

Whiter board—  
velvet-smooth surface—more rigid—  
tougher—better folding qualities—  
greater lustre and brilliance—  
perfect reproduction in either letter-  
press or lithography.

**AMERICAN COATING MILLS, INC.**

Main Offices and Plants—Elkhart, Indiana.  
Branch Plant—Chicago.  
Branch Sales Offices—Wrigley Bldg., Chicago;  
271 Madison Ave., New York City.  
Subsidiary—Modern Packages, Inc., Memphis, Tenn.

*The Secret is in  
the SURFACE*



**AMERICAN COATING MILLS**

**A.C.M. CLAY COATED CARTONS AND CARTON BOARD**



*everything that's NEW in*

☆ **P A C K A G I N G**

☆ **P A C K I N G**

☆ **S H I P P I N G**

The 15th Packaging Exposition sponsored by the American Management Association will for the first time bring together in one place and at one time the host of wartime developments that mean powerful new sales appeal, improved protection, and greater handling economies for your products.

Plan now to attend this greatest exposition of machinery, equipment, materials, supplies and services ever held in the field of packaging, packing and shipping!

**AMERICAN MANAGEMENT ASSOCIATION'S**

☆ **PACKAGING EXPOSITION**

**ATLANTIC CITY AUDITORIUM**

**April - 2 - 3 - 4 - 5, 1946**

*Every Angle Covered*

## same with Betner Service

To put it another way, Betner service is complete, "from idea to finished bag." Not just bag-making, though we make them by the billion every year. But ideas, designs, art suggestions, packaging advice — Betner's complete service includes them all.

As the picture above so subtly hints, every packaging angle covered. And it's a service you can employ *all or part*.

Famous brands galore go to market under the protection of Betner Bags. Frozen foods, powdered and dehydrated foods, coffee, cereals, flour mixes, many others — they're all "Betner-bagged" for easy filling and sealing, for insurance against leakage, seepage, loss of bulk or flavor.

We've helped a lot of processors with their packaging perplexities; perhaps we can do as much for you. Remember, Betner service is at your service, all or part. Ask us more about it; you won't be obligated in any way.

# Benj C Betner Co

DEVON, PA.

Benj C Betner Co of California,  
Los Angeles, Cal.



# Serving the leaders in 100 industries

For each specific requirement, there is one adhesives formula best suited to the job. From labeling to packaging to case-sealing—from the making of shoes or artificial flowers to bookbinding and the problems of the ship-builder—Arabol works on the principle of supplying specification adhesives to meet the needs of each individual customer.

That is why there are now 10,000 adhesives formulas on file in our New York, Chicago and San Francisco laboratories. That is quite surely why—as we enter our 61st year—we are able to cite our service to the leaders in a hundred different industries. It is also our reason for suggesting that you see the Arabol Representative when he calls; he knows adhesives!

## THE ARABOL MANUFACTURING CO.

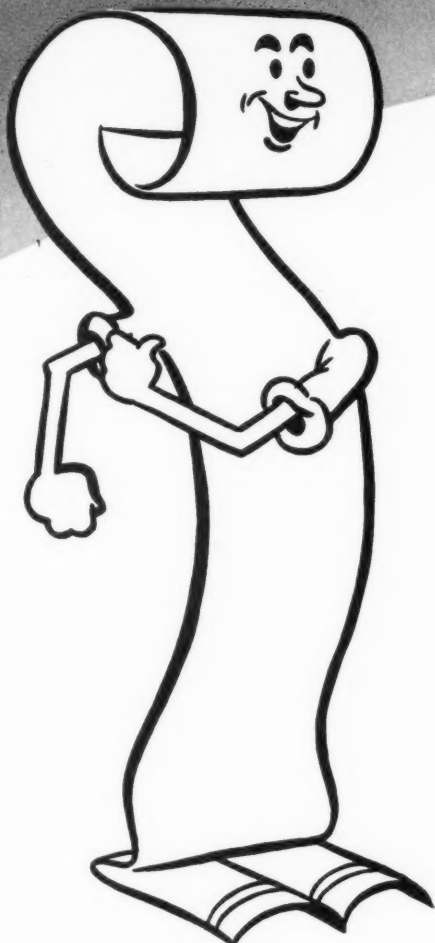
Executive Offices: 110 East 42nd St., New York 17, N. Y.

Offices and Factories: Brooklyn, Chicago, San Francisco  
Branches in Principal Cities

**PIONEERING**  
*in the making of*  
**ADHESIVES THAT WORK**

*Adhesives?...* **ARABOL!**

# HI-BINDER WRAPPER



*... Ready to go  
to work today  
solving package  
production!*

Finest for smart, practical packaging are war-tested HI-BINDER Wrappers, available now to do a first-rate selling job for your product. HI-BINDER'S wide variety of laminated cloth, metal, paper, cellophane and foil wrappers are flavor-sealed, grease and moisture-proof. For coffee, meats, tobacco, drugs — wherever freshness and flavor distinguish your product — HI-BINDER Wrappers deserve a trial.

Made in any size and thickness for packaging or carton linings. Our laboratory is equipped to meet your individual needs and fill your order now.

Converted by  
The Floyd A. Holes Company  
Bedford, Ohio, for

## THE CENTRAL OHIO PAPER CO.

226 North Fifth Street

Columbus 16, Ohio

Also in Detroit, Cleveland, Pittsburgh, Dayton, Indianapolis, Toledo, Charleston

**SPECIALISTS IN  
WRAPPER  
PROBLEMS**  
*Prompt  
Delivery*

# Rate your container, Mister!

---



1. Put your package on the desk in front of you. Look it over. Try to estimate its eye appeal, its *interest to your customers*. Then pick up your pencil and check at right:

Highly Attractive	<input type="checkbox"/>
Interesting	<input type="checkbox"/>
Fair	<input type="checkbox"/>
Not So Good	<input type="checkbox"/>

---



2. Now call in some of your merchandising staff. Talk it over. Try to decide whether your container is as *efficient* as possible. Then check your answer at right:

Highly Efficient	<input type="checkbox"/>
Good	<input type="checkbox"/>
Fair	<input type="checkbox"/>
Not So Efficient	<input type="checkbox"/>

---

**NOW** look over your check marks. If you have marked off *any* box that rates your container less than tops—*do this*:

Pick up your phone and call  
**American Can Company.**

**WHY?** Simply because we have 45 years' experience in devising containers which will be of *maximum* interest to your customers . . . of *maximum* efficiency. Our recent service with Uncle Sam has whetted our packaging skill.

Don't be satisfied with half-way measures. There's a tough postwar market to be faced—be certain that your package has the stuff to meet it. Call our representative or write us direct.



## **BETTER SAFE DELIVERY . . . . than Adjustment Claims**



*Damage in transit results in costly claims that injure prestige and drain profits. H & D can help you avoid expensive, annoying, time consuming claims by putting your products in corrugated boxes engineered to surmount practically every hazard of shipping and warehousing.*



**SUPER-STRENGTH  
for SAFE DELIVERY**

H & D corrugated boxes carry the concentrated weight of electric motors with the same ease that they do the most delicate of high precision instruments . . . and just as safely. Why? Because they are super-strength boxes. In this case, there's full-flap, 4-way end protection; there's a sleeve to add rigidity, and,

in addition, the motor will ride on a corrugated cushion to prevent shifting. Such boxes, H & D engineered, eliminate over-packing, reduce handling-shipping costs. Full details are in the Little Packaging Library. Send for it today. The Hinde & Dauch Paper Company, Executive Offices, 4601 Decatur St., Sandusky, Ohio.



**H&D HINDE & DAUCH**  
AUTHORITY ON PACKAGING

FACTORIES IN: Baltimore • Boston • Buffalo • Chicago • Cleveland • Detroit • Gloucester, N. J.  
Hoboken • Kansas City • Lenoir, N. C. • Montreal • Richmond • St. Louis • Sandusky, Ohio • Toronto

JANUARY • 1946

77



*War-born Packaging Materials  
to Protect  
Peactime Products\**

## **DECOTONE PRODUCTS** DIVISION

CUSTOM-CREATES PACKAGING MATERIALS FOR SPECIFIC PRODUCT NEEDS

Doesn't it stand to reason that a packaging material created specifically for your own product — to protect it against the particular hazards it encounters in shipping and storage — will do the job better?

It is regular Decotone procedure to work this way. Each new order is an individual problem, with our research laboratories developing the exact material that will best meet every requirement.

As a division of the Fitchburg Paper Company, we produce the base papers in our own mills, process and convert them in the Decotone plant — and thus control quality and characteristics from the pulp to the finished material.



Moisture, Vapor-Proof Barrier papers, cloth-lined, foil combined to paper materials, special coatings, foil and/or paper laminated to grease-proof or cellophane or acetate. These are but a few of the protective packaging materials Decotone developed and produced for war. Decotone know-how and facilities are now producing these and numerous others for 'peacetime use.



TOSS your problems on packaging materials in our laps. Our extensive experience is your assurance that we will find the right answer for you — promptly.

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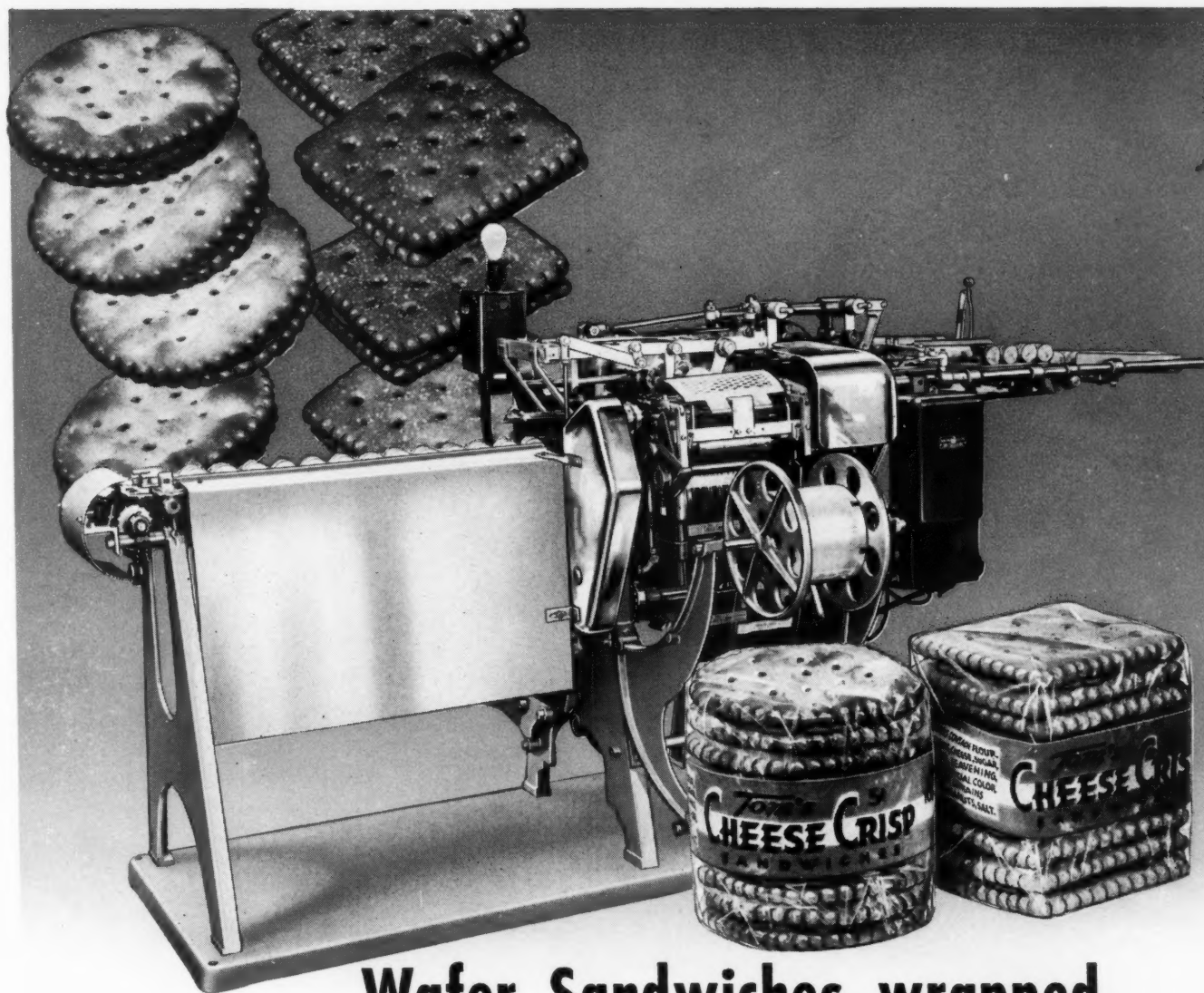
## **DECOTONE PRODUCTS**

DIVISION

**Fitchburg Paper Company**

PACKAGING PAPERS *Converted Papers* SPECIALTY PAPERS

FITCHBURG, MASS.



## Wafer Sandwiches wrapped without collars, trays or stiffeners ... by **WRAP-O-MATIC**

Notice the neat, trim transparent Wrap-O-Matic wrapping of these baked goods without the use of collars, trays, stiffeners, or inner-liners, and sealed without protruding ends or corners ... the latest achievement of Wrap-O-Matic.

Here is packaging at its best ... your product displayed with extra eye and sales appeal ... packaged at high speed with up to 75% savings in

wrapping labor and an unusually large savings in wrapping material costs. Let Wrap-O-Matic streamline your wrapping operations ... the advantages are tremendous. Write for your copy of our illustrated brochure and more information.

For Wrapping Candy bars, biscuits and cookies ... Wrap-O-Matic is the most popular wrapping machine in the confectionery and bakery field ... a real tribute to the flawless wrapping by Wrap-O-Matic.

# Lynch

**Package Machinery Corporation, Toledo 1, Ohio  
U. S. A.**

**NEW SPEED RECORDS** Filling Free-Running Frozen Foods!

**80 TO 100  
CARTONS  
A MINUTE**

In this new FMC Carton Filler, flat-folded cartons are automatically opened, set-up, filled with loose frozen (I.Q.F.) or fresh (granular) foods; then automatically closed—all at speeds up to 100 or more packages per minute.



FILLED AND PACKAGED AUTOMATICALLY WITH  
**FMC CARTON FILLER**  
*with opener and closer*

In plant after-plant, this new FMC Carton Filler is conclusively proving that free-running frozen foods can now be volume-packed mechanically—at speeds as high as 100 packages per minute on some products.

This latest FMC development brings to frozen-food packers, many spectacular advantages: greatly increased production capacity . . . substantial reduction in product han-

dling and overall costs . . . far more efficient filling and packaging . . . better utilization of plant space.

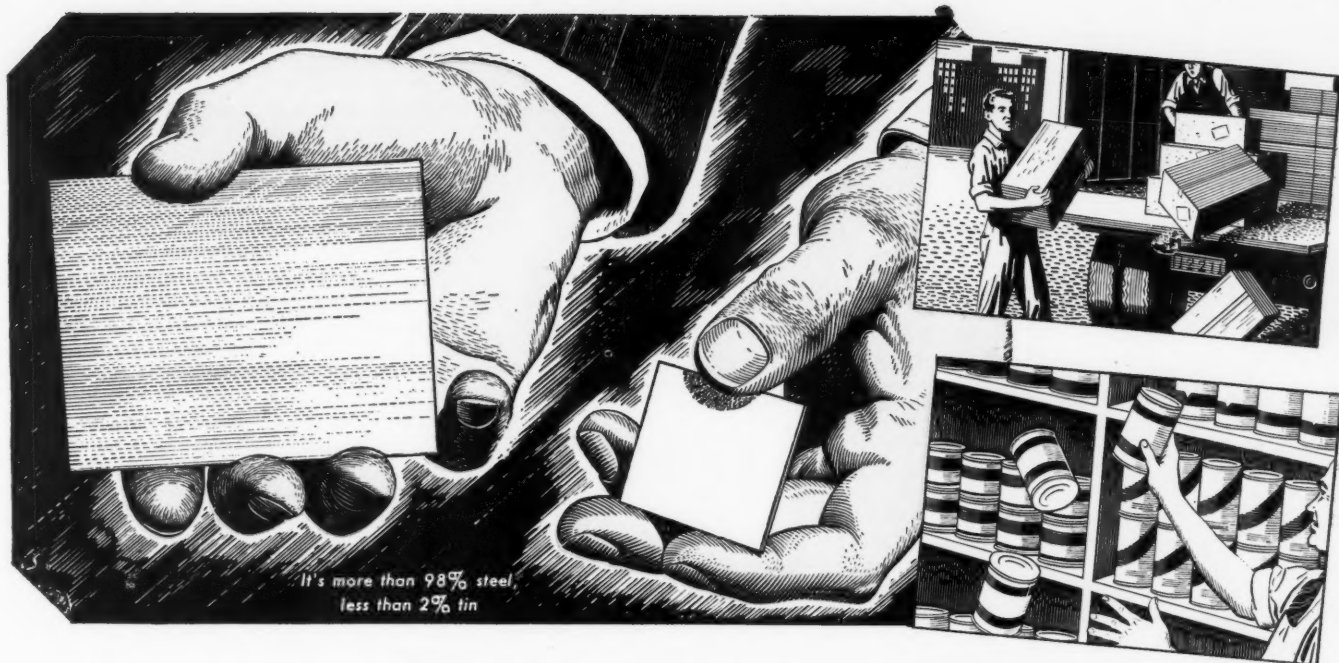
Initially developed for use with Marathon one-piece, top-opening cartons, this filling-packaging equipment is also available for similar type cartons of other manufacturers. For detailed information on how this new FMC Carton Filler can help speed and improve your frozen-foods operations, Write, Wire or Call us Today.

*Send for your FREE Copy of Catalog describing most complete line of machinery and equipment for processing corn, peas, beans, fruits and many other products.*

**Food Machinery Corporation**

SPRAGUE-SELLS DIVISION • Hoopeston, Illinois

CF-200



## How a Piece of STEEL and a Little TIN CUT BREAKAGE LOSS!

• Ever try to break a piece of sheet steel? It can be done, but ordinary rough handling and kicking around won't do it.

That's why steel-and-tin cans . . . which are more than 98% steel, less than 2% tin . . . are your package insurance against accidents at every danger point. Armored against the dangers of rough handling and improper loading, your products packaged in sturdy cans can be safely shipped and stored with no additional protective packing. And on eye-level, help-yourself retail shelves, shatterproof cans cut out breakage loss due to careless handling, and colorful labels lithographed right on the cans make for prominent point-of-sale display.

Consumer preference? You bet they like products packaged in durable metal containers, which can be safely stocked for future use . . . stay neat and clean . . . preserve the quality of your merchandise.

Yes, for packaging that protects . . . from packer to purchaser . . . you can *rely* on trouble-free steel-and-tin cans.

### Keeping America "Can Conscious"

As cans are returning in increasing quantities to the shelves of America's retail stores, a nation-wide advertising campaign . . . using full-page, full-color ads . . . is reminding shoppers that buying merchandise in cans is wise buying. 5 national magazines and the magazine sections of 47 Sunday newspapers are carrying over 28,000,000 of these printed messages this month.

CAN MANUFACTURERS INSTITUTE, INC., NEW YORK



### CHECK THEM OFF!

#### 5 advantages of packaging your products in cans.

1. **Shatterproof** cans won't break, crush, split or tear.
2. **Trouble-free** cans are economical to ship and store.
3. **Air-, light- and moisture-proof** cans preserve quality.
4. **Light, compact** cans save shelf and storage space.
5. **Lithograph-labeled** cans are effective sales tools.



NO OTHER CONTAINER PROTECTS



LIKE THE CAN

# ★ AMERICAN ANODE

Rubber and Plastics water  
dispersions for coating,  
impregnating, cementing

*Pioneer in water systems  
seeks problems relating to  
paper treatment*

THERE are three good reasons why American Anode water dispersions of natural and synthetic rubbers and plastics can be used to advantage in treating paper.

First, there's the *experience* that American Anode has accumulated over a period of many years. American Anode pioneered the work with water dispersed rubbers and plastics. That's why we invite you to submit your paper treatment problems to our development laboratory staff. We honestly believe that we can help you because we *know* how to use water dispersions most effectively.

Second, there's *economy*. Water systems do away with the need for expensive solvents and cumbersome solvent recovery systems. Processing is simplified. In most cases, it actually *costs less* to treat paper using a water dispersion.

Third, there's *safety*. Water just won't explode, causing dangerous and expensive fires. Nor will water give off toxic fumes. Our laboratory facilities and research staff are at your service. For more information please write American Anode, Inc., 60 Cherry Street, Akron, Ohio.

AMERICAN ANODE  
INCORPORATED

NATURAL AND SYNTHETIC RUBBER LATICES, WATER, CEMENTS AND SUSPENSIONS



**THE MORE THEY SEE IT**



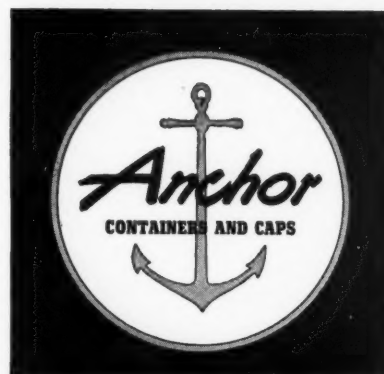
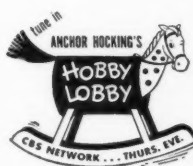
**THE MORE THEY USE IT**

... and they **SEE** it in **GLASS!**

**T**HE more your customer sees the product she has bought, the more she uses it . . . and the *quicker* she returns to the store to buy *more*.

Housewives like glass-packed foods because of their convenience and sanitary qualities. They like the clean, sparkling glass container because it permits 100% product inspection; serves as a storage jar; provides easy access to contents and affords efficient reseal protection. An Anchorglass container is inherently attractive; an honest container; inert to most products—preserving the delicate, fresh, true flavor of food products until consumed, and revealing them with all their colorful eye and appetite appeal.

Because housewives *prefer* glass packages to other styles of containers is in itself sufficient reason for you to investigate modern Anchorglass packaging. But there are many other advantages to be gained by packing in glass which we would like to explain to you,



PRODUCTS OF  
**ANCHOR HOCKING GLASS  
CORPORATION**  
LANCASTER, OHIO



# Speedry

**1 SEALED FOUNTAIN**



**2 ELIMINATES SOLVENT  
EVAPORATION**



**3 ASSURES CONTINUOUS  
COLOR UNIFORMITY**



**4 ELIMINATES  
WASH UP**



**5 VERY IMPORTANT  
SAFETY FACTORS**



**CHAMPLAIN**  
**STANDARD ROTOGRAVURE**



CHAMPLAIN COMPANY, INC. • 636 ELEVENTH AVENUE, NEW YORK 19, N. Y.

Check these 5 new  
outstanding characteristics  
of **ACRAWAX C**

1. anti-block
2. anti-tack
3. speeds up production by eliminating "stick" on the mill or calender
4. mold and die lubricant
5. moisture and solvent resistance

Small percentages of high melting point (280°F.) ACRAWAX C incorporated into plastics and elastomers are producing excellent results.

**TYPICAL SUCCESSFUL APPLICATIONS:**

Unsupported films or sheets—vinyls, Neoprene, GR-S, for anti-block and anti-tack.

Coatings—vinyls, polyvinyl butyrals, nitrocellulose, for anti-block and anti-tack.

Molded articles—synthetic elastomers, thermoplastic and thermosetting resins,

for mold release.

Hot melts—of many types and for many purposes, as those used for coatings, impregnations, sealants, potting compounds, etc., have benefited greatly from the desirable characteristics of ACRAWAX C.

**IN ADDITION** to solid and granule form **ACRAWAX C** is available as

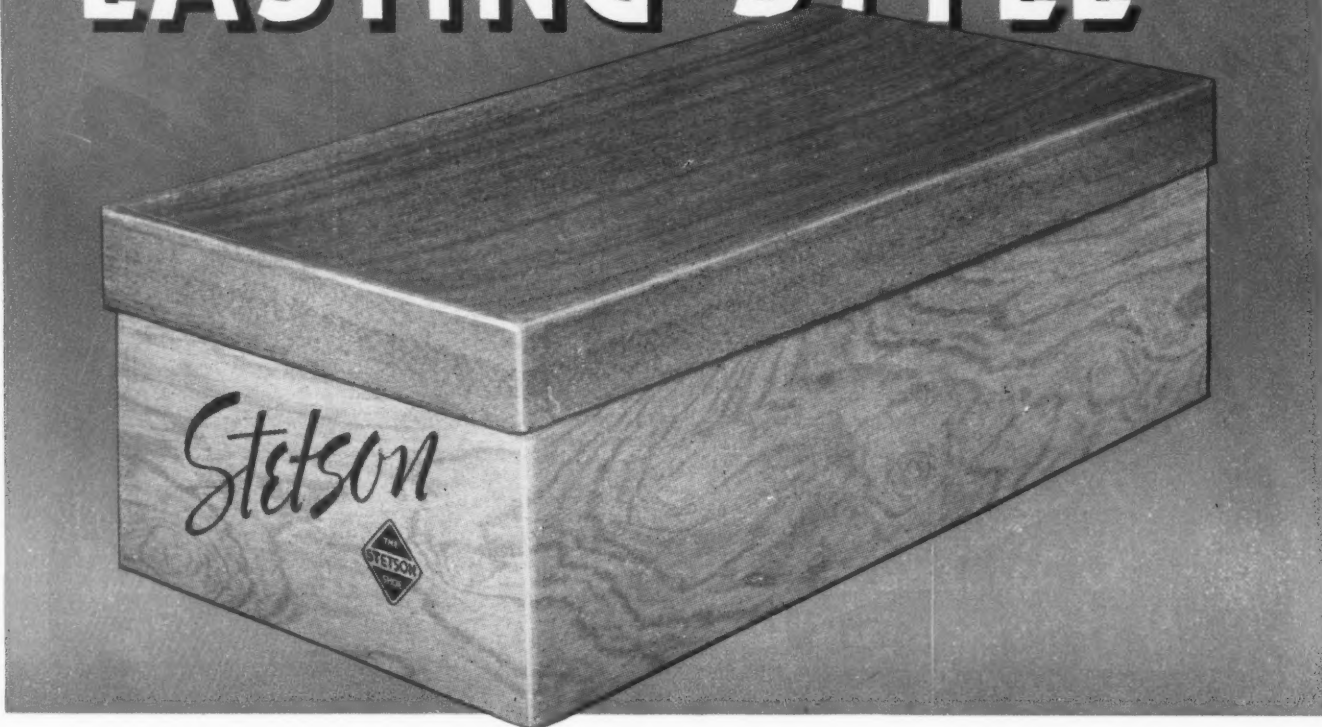
1. **POWDERED** — approximately 100 mesh
2. **ATOMIZED** — approximately 3 microns

In these finely divided forms, greater ease of processing and incorporation into the blend is obtained.

For further information on ACRAWAX C write to Dept. M.P.K.

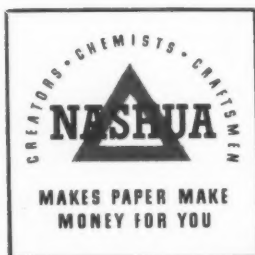
**GLYCO PRODUCTS CO., Inc.**  
26 COURT STREET, BROOKLYN 2, NEW YORK

# LASTING STYLE



Protection is the first function of a container — protection of the contents. Then there is “self protection” of the container’s appearance; important because a soiled or faded package indicates to the consumer “old stock”, possibly stale or deteriorated. Nashua covering papers are

finished to keep attractive shelf appearance. Colors remain bright, backgrounds clear, base stock strong. Many Nashua coatings have special protective characteristics. Let us help you select the right covering — the kind the insurance man calls *full coverage*.



**NASHUA GUMMED AND COATED PAPER COMPANY, NASHUA, N. H.**

## APPEARANCE IS EVERYTHING, MISTER

Pardon me, Mister, but I’m interested in appearance — the appearance of your product, for one thing. You see, we girls buy \*93% of all packaged products, and you know how clothes-conscious we are! Well, here’s a tip: Let Nashua give your product a party dress, if you want it to run around in our crowd!



# MODERN PACKAGING

VOLUME 19

JANUARY 1946

NUMBER 5



## *The Prospect for 1946*

Like the rest of the 133,000,000 in the United States, packaging people face 1946 with the question "When can we get it?" The reference in their case is, of course, to material, equipment, service and supplies necessary for the normal operation of packaging lines.

Obviously the scars of a major operation can't heal overnight. With the whole world destruction-bent for four years or more, there are bound to be yawning gaps in all stock piles. Few business men of any experience expected the shortages to cease simultaneously with the shooting, but—in the words of one impatient packaging man—"It seems like an eternity that we've been enduring shortages."

For the purpose of this review, the editors of MODERN PACKAGING sounded out opinion in the three interconnecting fields most concerned with packaging matters—users, Government and suppliers. The atmosphere, in general, is not charged with optimism. For the most part, people seem to be resigned to a further and almost indefinite continuation of shortages. This is not a willing submission to circumstances, but it means simply that they are making the best of a bad situation, knowing that in time relief will come.

Foremost expression among users of packaging is the desire for a return to quality. "Ersatz" materials,

they say, are getting more and more flimsy. Bitterness is felt in some quarters owing to a suspicion that some suppliers may possibly be taking advantage of a seller's market to dispose of cheap substitutes at maximum prices. Only the short-sighted, it is true, would follow such a practice; the majority of manufacturers realize that the day of reckoning would catch up with them sooner or later.

Specifically, the complaints about quality are directed first at paper—one big consumer reeled off an

*The prospect for packaging in 1946 is neither all good nor all bad. It will be a year of production headaches, but undoubtedly a year of tremendous business activity. In this last-minute telegraphic survey by MODERN PACKAGING's editors, made just as the old year was closing, package users take down their hair and tell just what they want and need for the first peacetime year of production; suppliers and Government authorities just as frankly tell what the present prospects are for filling these wants.*

*Much depends on getting the pulpwood in from the forest.*

KAMP-FREDERIC LEWIS PHOTO



LASS-FREDERIC LEWIS PHOTO



indictment of seven specific counts: (1) the grade of stock is inferior; (2) discoloration is common; (3) the finish is unsatisfactory; (4) light resistance is poor; (5) surface won't take varnishing properly; (6) curling of stock is a common fault; (7) coated stocks are sadly lacking in uniformity of color—especially disturbing in various white stocks. "Backgrading," it should be pointed out, not only sacrifices package appearance, but sometimes seriously slows up production.

The shortage of container board has been made more acute by the let-down in waste paper collection. The volunteer agencies that had been doing such good work almost unanimously abandoned their efforts when V-J Day came, not realizing that the aftermath of war would still be serious. One large food company—whose salesmen certainly have no selling task at present—has put its sales organization on the job of stimulating and encouraging salvage and waste paper collection, utilizing their own equipment for the purpose of making sure it reaches their own plants.

In some fields the shortages of ingredients are so acute as to make the shortages of packaging materials fade into insignificance. The confectionery people, for example, are reduced to half capacity output because of the lack of sugar—and that will be a serious problem, says one purchasing agent, for the next two years. By that time, he believes, packaging problems will be entirely normal.

Of particular significance, in view of the general situation, is the consideration being given to consumer preferences regarding packages. "One wrong guess," said a food manufacturer, "and you may find yourself out of business!" Another commented on the ready consumer acceptance of the flexible container for dehydrated foods as compared with some hesitation about accepting the same product packaged in tin or glass.

"The quantity is the same," he added, explaining that apparently the consumer—accustomed to larger containers for foods packed in tin or glass—rejects the miniature jar or can containing dehydrated foods because it looks so much smaller, but willingly buys the new type of container with the same contents.

These flexible containers, however, according to users of them, are going to make imperative the development of equipment and methods for better sealing, particularly in the case of laminations of metal foil.

At least one user of metal packages will gladly welcome tin when that long-absent material comes back. "We discovered a lot of things about tin that we just took for granted," he said, pointing out that substitute coatings leave a bare edge that permits rust to set in within a week or ten days. The nature of his products and the extent of his distribution make it necessary to plan for a shelf life of two years—and he'd like to prepare for four.

Collapsible tubes come in for criticism on the basis of inferior quality, though users know that the makers are keenly aware of the deficiencies. On the whole, the substitute alloys have done a pretty good job; users hope for a restoration of quality nevertheless.

The quality of plastics used in fabricating closures is not too satisfactory, say some users. Almost all the compounds leave something to be desired in the way of uniformity. Likewise, the coatings used to face closure liners show a lack of uniformity; and for some products this results in serious problems.

Planning goes on apace. In fact, there is probably more specific planning being done now than at any time in the previous history of packaging. With most producers, the war contracts are all finished and out of the way, leaving the stage clear for as rapid a return to civilian business as conditions permit.

Most of the plans have the "when—as—and if" tag on them, although some are slated for immediate execution. For instance, a drug house will make, almost any time now, a change of package form from square metal can to special mold of glass; from fibre cans to extruded aluminum containers for its line of staple products. Design studios are crammed with plans for redesigned lines. Some of the new packages may be expected to appear early in 1946; others await readier availability of materials.

Machinery needs, unsatisfied for four years, are pressing the package production man more than ever. He is reconciled to a longer wait, even though sometimes he is inclined to feel that the machinery maker—riding the crest of the heaviest demand in years—is not doing all he can to catch up. In some cases the waiting period is resulting in a clearer conception of what a company needs. Perhaps the sharpness of impending competitive conditions will drive more producers to fully mechanized production lines—when they can get the machinery. For example: A food company plans complete mechanization, in half a hundred plants, for a line of three hundred kinds of cookies, cakes and crackers. A toiletries house is starting with the premise that all of their present equipment is obsolete. Formerly they designed packages that could be produced on existing stock models of machines. From now on out, we are told, it is their intention to develop the kind of package the product demands, then design custom-built machines for the production line. Optimistically enough, they are allowing two years to carry out this plan. Other machinery users, though their operations are not so extensive, are just as clear regarding what they need. One specific need: A machine for filling pastes with absolutely uniform accuracy of content. Another: Automatic net weighing machinery for dehydrated foods. Still another: Equipment for heat sealing an overwrap of cellophane.

All told, the package user generally realizes that he faces a very busy year—and one full of headaches. Despite the difficulties and problems ahead, however, he is hopeful and optimistic. He knows those problems will be tough—but not insuperable.

## GOVERNMENT CONTROLS

The Government is still maintaining a careful watch over the materials needed for packaging. According to their present outlook, very few packaging materials rate any better than "fair" as to supply. The tabulation herewith presents the comparison of the situation reported by WPB early in the year 1945, with the same type of report as made by the Civilian Production Administration (WPB's successor at the present time.)

From this list of some 45 items it appears that the allocation controls have been revoked on some 24, with more revocations planned. Price controls under the

MATERIAL	CONTROL ORDERS		SUPPLY SITUATION	
	<i>In Force Jan. 1945</i>	<i>In Force NOW</i>	<i>January 1945</i>	<i>January 1946</i>
Acrylics	M-300	M-300	Fair	Fair
Adhesives	M-333	M-333	Good	Good
Aluminum	CMP	None	Fair	Good
Barrels				
Slack Cooperage	L-232	None	Short	Fair
Tight Cooperage	L-232	None	Fair	Fair
Wooden Beer	None	None	Short	Short
Bags—Textile	M-221	M-221	Very	Very
			critical	critical
Bags—Grocery and Variety	L-261	None	Very	Tight
			critical	
Baskets, Hampers, Crates	L-232	None	Poor	Fair
Boxboard	M-378	None	Critical	Fair
Container Board	M-290	None	Very	Fair
			critical	
Boxes—Folding and Set-Up	M-378; L-239	None	Critical	Fair
Boxes—Wood	L-232	None	Critical	Fair
Cans—Metal	M-81	M-81	Fair	Fair
Casein	M-307	None	Fair	Fair
Cellophane	L-20	None	Fair	Fair
Cellulose Acetate	M-300	M-300	Fair	Fair
Closures	L-103-b	L-103-b	Plentiful	Fair
Coatings—Protective	M-382	None	Adequate	Adequate
Containers—Corrugated and Solid Fibre	L-317; D-146; M-290	None	Critical	Fair
Containers—Glass	L-103; L-103-b	L-103; L-103-b	Good	Good
Containers—Specialty Flexible	L-305	None	Fair	Fair
Copper	M-9-c; CMP	None	Critical	Good
Cork	M-8-a	None	Fair	Fair
Drums—Fibre	L-337	None	Fair	Fair
Drums—Steel	L-197; CMP	M-21	Critical	Critical
Ethyl Cellulose	M-300	M-300	Fair	Fair
Glues—Animal	M-300	M-300	Poor	Fair
Lead	M-38	M-38	Critical	Tight
Machinery	CMP	None	Critical	Tight
Paper	Various	(Some revocations planned)	Very	Critical
			critical	
Paper—Glassine	M-286	None	Critical	Critical
Paper—Waxed	M-351	None	Fair to poor	Fair to poor
Paper—MVT Barrier	M-380	None	Critical	Tight
Phenolics	M-246	M-246	Critical	Critical
Polystyrene	M-300	M-300	Tight	Tight
Rubber—Natural	R-1	R-1	Highly	Highly
			critical	critical
Rubber—Synthetic	R-1	R-1	Plentiful	Fair
Sacks—Paper, Shipping	L-279	None	Critical	Tight
Steel	M-81; CMP	M-81; M-21	Tight	Very tight
Tin	M-43; M-81; M-115	M-43; M-81; M-115	Highly	Highly
			critical	critical
				but appears to be improving
Tubes—Collapsible	M-115	M-115	Critical	Critical
Urea	M-300	M-300	Fair	Fair
Vinyls	M-300	M-300	Fair	Fair
Zinc	M-11-a; M-11-b; M-11-L	None	Plentiful	Plentiful

OPA are, on the other hand, quite a different matter.

The Government is still very package conscious because of its military needs as well as its concern with supplying the needs of war-torn nations. The Bureau of Agricultural Economics, charged with much of the procurement responsibility for foods, made the following forecast regarding packaging materials in a recent bulletin:

"While no serious bottlenecks are anticipated in food packaging during 1946, re-use of paperboard containers should be encouraged and supplies of tin plate will be watched carefully. A factor in the paper situation is the threatened drop in pulpwood production in the South, main source of kraft pulp used in the manufacture of wrapping papers and containers, caused by difficulty of replacing war prisoners used as cutters. Present quota restrictions where tin plate is involved will be maintained until new supplies of tin are assured from the East. Use of tin cans manufactured by the electrolytic method, saving two-thirds of the tin needed for regular 1.5 hot-dip plating, promises to expand as a result of wartime experience. The situation in glass containers is expected to continue tight at least through the first quarter of 1946. With no slackening of demand for this type of container indicated, improvement awaits increased manufacturing capacity, now limited."

## FUTURE OUTLOOK

Industry, for the most part out from under the onerous burden of allocation controls of packaging material, is enjoying its unaccustomed freedoms and is taking full advantage of them to plan, predict and criticize. Chief objects of criticism are "unreasonable price controls" by OPA and "unreasonable demands and unpredictable conduct" on the part of labor. In some lines it is predicted that unless price relief is granted a situation will develop that will almost approach a breakdown of production. These gloomy forebodings, however, are held by a minority. As to labor, in most of the packaging lines it seems to be the

feeling that while unrest is a problem, troubles can and will be ironed out.

As to the supply situation, good buymanship and careful long-range anticipation of wants is going to be the order of the day for some time, because in practically all lines short stocks and long deliveries will be the rule. In order to present the reader with specific conditions, MODERN PACKAGING gives the following up-to-the-minute reports gathered from representative firms in the many and varied supply lines of importance.

### Adhesives

Production of adhesives is expected to fall off perhaps as much as 25% during 1946, due primarily to shortages of the basic raw materials. Tapioca, for instance, is practically non-existent, although corn base derivatives are easier. Flexible glue adhesives and animal glues are also somewhat tight. Most resin adhesives are available for immediate delivery. As to prices, the market has been fairly stable since 1942 and prices are now being held firmly by OPA. Manufacturers, however, anticipate moderate price increases during 1946 because many of the raw materials have advanced.

### Bags

*Textile Bags*—The supply depends entirely on such raw materials as burlap and cotton cloth; the facilities for producing are more than ample. During the first half of 1945 burlap was critically short, but the situation is now better. Cotton cloth supply will be critical for the next few months. The industry is making an effort to secure relief through appropriate Government action. If this comes, there will be no difficulty in meeting current needs, although inventory accumulation or long term needs must wait until after the first quarter of 1946 at least. Price ceilings maintain currently stable figures; future prices will depend on raw material conditions.

*Multiwall Bags*—During the war years, production of multiwall bags increased some 75% or 80%. Some of the manufacturers are definitely planning on maintaining these levels of production. Most of them are in a position to make deliveries within 60 to 90 days after receipt of fully specified orders. The price curve

PHOTO COURTESY OWENS-ILLINOIS GLASS CO.



"Demand runs about 25% over supply. Stock molds for another year at least will continue to be advisable."

*"Producers report an all-time high interest in aluminum—particularly foil—for packaging purposes."*



PHOTO COURTESY ALUMINUM CO. OF AMERICA

will probably be slightly increased to cover advancing costs.

#### **Barrels**

The cooperage industry is in a serious plight due to three causes: (1) inadequate ceiling prices; (2) lack of manpower; (3) bad weather. The last named factor, particularly because of floods, delayed woods operations for several months. Oak especially is scarce although other timbers are fairly available. In many plants operations are at a standstill because the manufacturers are caught between rising costs for material and labor on the one hand, and OPA price ceilings on the other. Interesting development: In eight cases, to overcome shortage and circumvent price controls, distillers have bought cooperage plants outright, operating them themselves sometimes at a loss—but getting the barrels! For the industry generally, deliveries are being made "when, as and if," with no definite promise.

#### **Boxes**

**Boxboard**—V-J Day did not end the paper shortage. Pulp and paper stock may be expected to continue tight at least during the first quarter. Inventories are very low; manufacturers and their customers appear to be living from day to day. OPA price controls are still in force. Manufacturers are hoping for some relief as the only foreseeable escape from the mounting costs of labor and raw materials. Deliveries, normally four to six weeks, now are eight to ten weeks.

**Folding Cartons**—Most manufacturers are booked solid for the first quarter. Few of them have the facilities to take on more than their regular customers' requirements. To some producers the general situation looks more favorable for the months ahead, particularly after the first quarter. In some cases delivery promises are ninety days but this is unusual. Five to

six months seems to be the present norm. Price trend will definitely be up.

**Set-Up Boxes**—Material shortages cover most varieties of board, metalized papers and transparent films, as well as fancy, flint and other coated papers. Producers report full bookings for at least first half of year, in some cases for the entire year. One comment on the labor situation indicates no great unrest, with new applicants plentiful and better discipline in evidence. The industry is badly in need of new equipment. Existing sources can't deliver set-up box machines for eight to twelve months. Set-up box makers are reluctant at present to take on fancy jobs. Price trends would be up if it were not for controls.

**Fancy Wood Boxes**—Indications are that orders will again be plentiful—as will also production difficulties! Among the difficulties are production shortages, particularly of lining materials such as satin, leatherettes and velvets. Skilled labor is still very short. Delivery promises, reluctantly given, range from eight weeks to several months. Some makers have been forced into the position of accepting no additional orders until they catch up with demands of present accounts. Makers expect prices to rise perhaps 10%.

#### **Cellophane**

Current demands indicate that this popular packaging material will be even more widely used than prewar. Present facilities are inadequate to meet needs, but increased plant capacity will be available next fall. Future price trends are difficult to predict, but one leading manufacturer points to a record of 21 price decreases since 1924 as typical of a firm policy of sharing decreased costs with the users of the material.

#### **Closures and liners**

Manufacturers expect the picture to improve gradually, as supply catches up with demand. The metal



PHOTO COURTESY CONTINENTAL CAN CO

*"Many products are returning to the metal can."*

and plastic raw material situations appear to be clearing up, although there is some fear that a steel strike may upset the apple cart. Natural rubber, of course, is very scarce, though substitute sealing compounds are serving well. Cork will be available for the entire year 1946 and cork manufacturers are promising four to six weeks deliveries. Deliveries of plastic closures will depend on the policy adopted by raw material manufacturers. Price trends will probably be upwards.

Liner manufacturers have been hampered by unavailability of pulp, delivered to them in restricted amounts. They anticipate improvement after the first quarter. Their deliveries are slowed up so that they can promise only five or six weeks. Makers look forward to steady increases in the volume of business, based on prospects for glass containers. Price predictions are not downward.

#### Coatings

Manufacturers anticipate an increasingly bright picture as the year progresses and even the first quarter will be quite satisfactory. Deliveries are quite prompt, most concerns being able to promise two or three weeks. Prices at present are quite steady with the possibility of a slight downward trend during the last half of the year. One manufacturer points out that if the Government should buy in large volume it would drastically change the delivery situation. According to present indications, however, this is not a likelihood.

#### Glass containers

Demand for special and stock bottles continues to run about 25% over the supply. Some producers predict no change in the present backlog during the next 6 to 12 months. The 1946 volume will probably approximate that of 1945. Stock molds for another year at least will continue to be advisable, if the industry comes anywhere near meeting current requirements. One source points out that if special molds were used as extensively as in 1940, the gross production would be reduced between 15 and 20%. Planned delivery schedules of stock molds to established customers permit 90-day delivery, though some deliveries require four to five months. Most manufacturers anticipate no change in price levels.

#### Lithographic and printing service

*Labels and Wrappers*—Users will face delays and difficulties due first to shortage of label paper and second, because of unusually heavy demands for labels. This demand was occasioned by the Government releasing large quantities of canned fruits for public consumption, most of which required re-labeling, and canners were caught with low inventories. Deliveries are meeting usual standards; prices remain strong.

*Display Material*—Many types of paper are scarce, especially some varieties of coated papers, though some producers don't expect too bad a material situation. Skilled labor is also scarce and demands for wage increases are anticipated. Delivery promises quoted range from three to six months from the approval of finished art work. Prices are expected to increase.

#### Machinery

Reports generally predict exceedingly high production during 1946. Labor unrest aggravates the difficulties in some sections, though other reports indicate that the return of employees from service is gradually curing the shortage of skilled labor. Manufacturing facilities in many cases are being expanded, although this will not bear fruit for some time. Some makers are discontinuing certain models in order to concentrate on fewer styles. As a rule, any machines that will be delivered during 1946 represent orders already on file—perhaps for some months. Price increases of 5% to 15% are predicted.

#### Metals

*Aluminum*—The raw materials for aluminum production are abundant. Manufacturing facilities, greatly increased during the war, are to be still further expanded and most of the expansion will be for the production of foil. Aluminum producers report an all-time high interest in aluminum—particularly foil—for packaging purposes. Cloud on the horizon is the labor situation, involving perhaps big strikes as well as slowdowns. Normal effect of increased production will be declines in prices—providing nothing else interferes.

*Metal Cans*—Predictions are for a big year in 1946.

Many products are returning to the metal can from substitute packages made necessary during the war. Some can makers report a reasonably good situation as to availability of raw materials, although the prospect of strikes is disturbing. Deliveries are being made in four to six weeks and this will probably continue during the first quarter. Price trend is upward.

**Copper and Brass**—The cosmetic field, principal users of these metals for packaging, welcomes the news that they are gradually becoming more available. During the war, first call was for prime military uses but restrictions have been removed. Prices will probably remain at current levels.

**Collapsible Tubes**—The industry has ample capacity to fill users' needs. The raw material situation, however, is not too happy, tin being highly critical and lead being very tight. Makers anticipate being restricted to the same quota of lead for the first quarter of 1946 as provided by the current restrictions. They are also under certain restrictions regarding the taking of orders. At that, they anticipate a year of extremely heavy production. The capacity of the entire industry is probably entirely filled for at least the first quarter. Although labor and other costs have increased, price advances are not expected; one maker even thinks reductions of price "entirely logical."

#### Paper

Little improvement is expected during 1946 in the generally tight paper situation, but 1947 will show a material improvement. Delivery schedules on certain wax specialties are quoted as approximately eight weeks. Prices, frozen now, will probably rise. Certain special manufacturing items require up to three months. Manufacturers of fancy paper for box coverings will be filled to capacity for at least the first half of 1946. These manufacturers report a condition better than before V-J Day but are still suffering from lack of availability of base papers, as well as some other raw materials. Deliveries 60 to 90 days; price trends upward. Some orders being placed at prices at the time of shipment.

#### Plastics

**Transparent Films**—Increased plant facilities, now under construction, are expected to afford considerable improvement in availability by next fall.

**Rigid Transparent Sheets**—Tight during first quarter; some improvement during second and third quarters.

**Cellulose Acetate**—Will continue short until relieved by additional capacity the latter part of 1946.

**Ethyl Cellulose**—Available in substantial quantities.

**Nitrocellulose**—Situation gradually improving.

**Chlorinated Rubber and Latex Films**—Situation should improve by mid-year.

**Polystyrene**—Improvement not expected during 1946.

Most plastics are still under control orders. Producers at present can only accept a fraction of the orders offered. Prices are expected to remain stable. Some predictions of price reductions are being made,

based on the effects of increased volumes of production.

Plastic fabricators anticipate improved delivery conditions during the year. They are not bothered at all by production facilities and apparently do not anticipate labor disturbances. Most of the fabricators predict little change in prices.

#### Shipping containers

**Container Board**—Little relief is expected in the near future in the critical shortage of corrugated container board. Some sources point out that the shortage may possibly last throughout the entire year. As a natural result, prices will continue firm. Delivery promises at present are 10 to 12 weeks.

**Corrugated and Solid Fibre Boxes**—Producers anticipate not only a continued strong demand but a further increase in the call for paperboard shipping boxes certainly through the first half of 1946. Some manufacturers predict a leveling off about July. Additional mills would provide much needed increased capacity, but it will be two years before this increased capacity is in existence. Deliveries are promised in two to six months, depending on the style and kind of box. Price trend will likely be upward to cover increase in cost.

**Fibre Drums**—Demand will probably exceed supply, although there is a prospect that all materials will become more available during 1946. The present outlook appears quite good and seems to be improving. Four to six weeks delivery is being promised; the war-induced capacity increase promises good service for future users, and some producers predict improved product at no increased cost. Price trends will probably be in the direction of moderate advances.

**Steel Drums**—Steel is now critically short and is expected to remain so all during 1946. The mills will doubtless find it necessary to continue with their individual allocation of available tonnage. All users should anticipate requirements as far in advance as possible—manufacturers are reluctant about making delivery promises. The industry has appealed to OPA for relief, granting of which will govern price movement.

#### Specialty flexible containers

Manufacturers and converters in this field are hopeful that the paper shortage will ease up by the third quarter of 1946. They foresee a rapidly expanding market for this type of container, but—although transparent and latex films are now permitted for civilian packaging—demand will outrun supply for perhaps the entire year. The labor problem is expected to ease off gradually during the year. Present delivery promises run from two to four months, compared with 30 to 60 days normally. Price trend would doubtless be upward if it were not for OPA controls.

#### Veneer packages

**Berry Crates, Baskets, etc.**—Buyers may encounter difficulties in filling requirements. Production decrease of perhaps 15% is expected. A heavy demand is anticipated in the face of material shortages, price restrictions and labor problems.

# 300,000 parts... packaged under one trademark



1

*International Harvester starts a packaging program with a model dealer outlet as a base of operations. . . . puts a new I-H trademark on the building. . . . identifies its hundreds of packages with the same familiar symbol and colors. . . . designs packaging plant layout as pattern for smooth operation in all its packaging units. Such is the broad scope of packaging programs that will compete in future American merchandising.*



2

1—An exterior view of the model I-H dealer outlet. 2—Department in which parts are sold. Emphasis is on open display, which puts a premium on attractive package appearance and the proper identification of each part.

How would you like to tackle this one? . . . A package planning program to cover some 300,000 parts items, embracing a line of products ranging all the way from nuts, bolts and binder twine to farm machinery, motor trucks, industrial tractors, produced through eight individual manufacturing operations?

That is the Bunyanesque chore which faced International Harvester Co., when it set out two years ago to integrate its entire packaging program in the interest of efficiency, economy and improved merchandising. Of the 300,000 "active" parts items, some 30,000 entail a usage of 750 or more units each year. Practically all of those items in the latter category must be packaged.

Because of the diversity of Harvester operations, the program necessarily was established on a long-term basis. Now the comprehensive plan is in operation. And this is how it was accomplished.

Under the company's previous packaging program,

whose essential features took shape over a period of years with relatively little emphasis on an overall policy, each plant operated by I-H established its own packaging policies. This meant that there was little or no unification of package types, unit counts of products contained, or methods of package identification. The problem was further complicated by the fact that products sold by International Harvester carried different trademarks and names—McCormick-Deering, International, IHC, Triple Diamond and others.

Typical of the lack of uniformity under the former system was the variety of methods used to identify different packages. This matter was left to the various production, parts or packaging departments, since the packaging operations were not completely centralized. As a result similar items were handled in many different ways. For identification, some of the packaged parts carried gummed tape, while others utilized a rubber stamp. Still others were identified with a marking crayon.

In some of the plants, cartons were printed in advance on heavy runs of staple items. This resulted in much carton obsolescence and the frequent necessity of blocking out the original markings and substituting new

ones—a practice which rarely improved the appearance of the packages. Another identification problem was created by the large number of standard vendor items handled by the International Harvester dealer outlets, each of which was packaged in its own way and carried individual trademarks

It had long been recognized by the Harvester organization that a sound program of package unification, based on a thorough study of all aspects of the former packaging set-up, would do much to eliminate wasteful practices, insure better protection for the company's diverse line of products and facilitate modern merchandising methods through the incorporation of a definite family relationship embracing the full line of packages.

Development of such a program was turned over to a special packaging committee which had been established during the war, primarily for the purpose of "policing" the company's packaging to assure protection and other aspects at the highest possible level consistent with wartime packaging restrictions. Headed by a member of the consumer relations department, a staff department which serves all divisions of the company, the packaging committee includes the supervisor

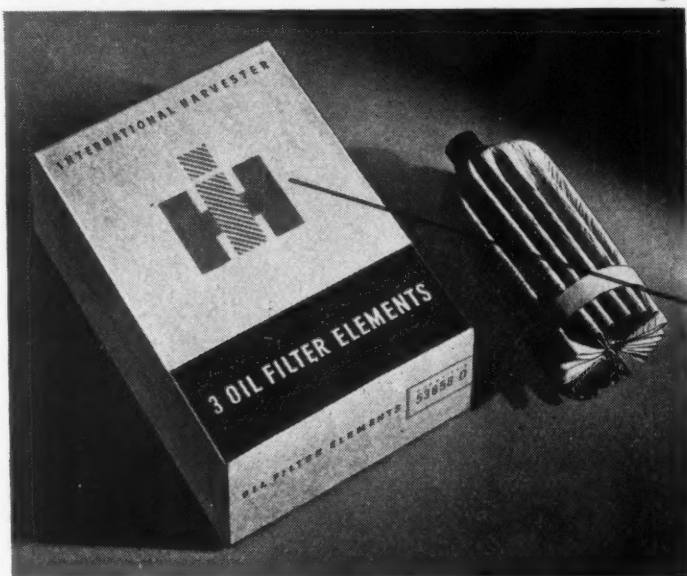
of packing and loading in the manufacturing research department; a representative of the order and distribution department, conversant with the warehousing and stocking aspects of packaging; two representatives from the sales department—one reflecting the merchandising viewpoint, the other, that of pricing—and a representative of the purchasing department.

When the decision was made to evolve a positive, company-wide packaging program, International Harvester enlisted the services of a prominent industrial design organization. It was felt that such an organization could supply an impartial point of view and would have the facilities to work with the packaging committee in formulating a plan which would cover not only packaging but also the company's broad merchandising program, including the design of the individually owned dealer outlets through which the I-H line of products is sold to farmers, truck operators and other customers.

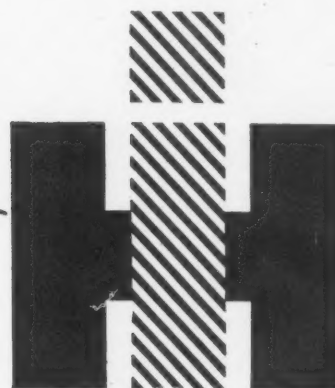
To unify this entire activity, a new I-H symbol was devised to bring all the company's packages, regardless of their source, into a clearly apparent family relationship. After perfecting this new trademark, the co-operating industrial design firm, working closely with the sales operations research department and the

PHOTOS, STANDARD STUDIOS, INC.

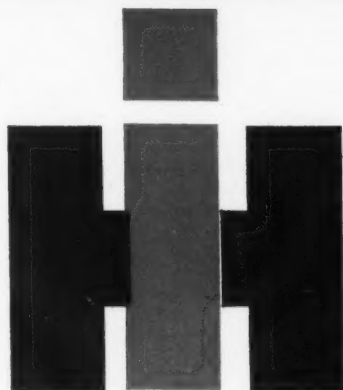
3



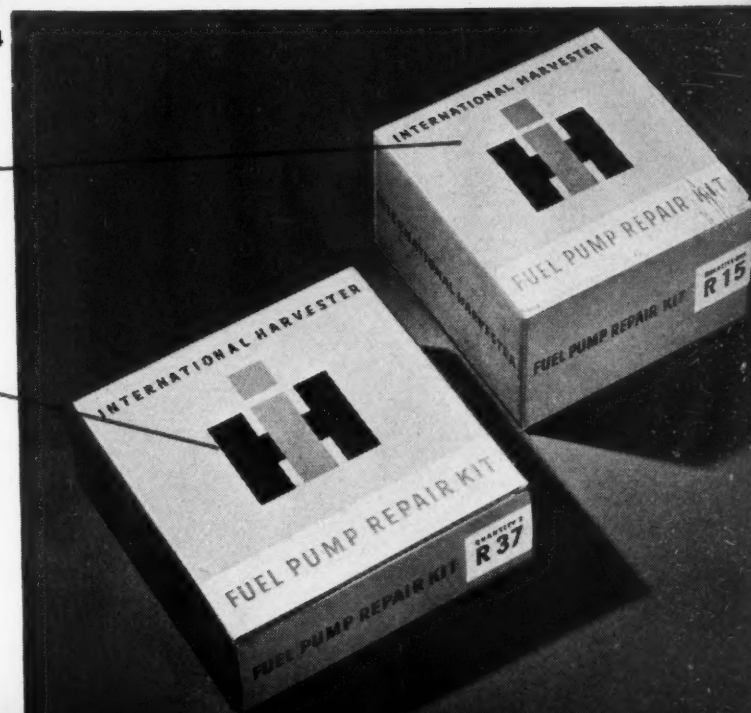
3—Carton for oil filter elements. Printed in red and dark gray on kraft, protection is afforded by inner wrap. Cross-hatched trademark is used in one-color printing (red) to give distinction to both letters.



4



4—Carton for oil pump repair kit illustrates use of solid color trademark printed in two colors, red and black.



division sales departments, began exploring the possibilities of a general program to enable the International Harvester dealer to do a more effective job in selling the complete line. As the logical starting point for this project, a special dealer base of operations was designed with a building which would of itself serve as a "package" for the entire selling operation.

Before designing this base of operations, a comprehensive study of dealer requirements was made, with particular emphasis on the location of specific areas in which the various functions connected with a dealership would be performed. Beginning with a basic work unit, the dealer building was worked out so that as a dealership grew and took on additional services and facilities, the structure would be enlarged according to a set plan which would insure maximum utilization of space and merchandising efficiency. Thus, the dealer building, a part of the base of operations, was designed from the inside out, as it were, and the entire facility enclosed as a functional, working package.

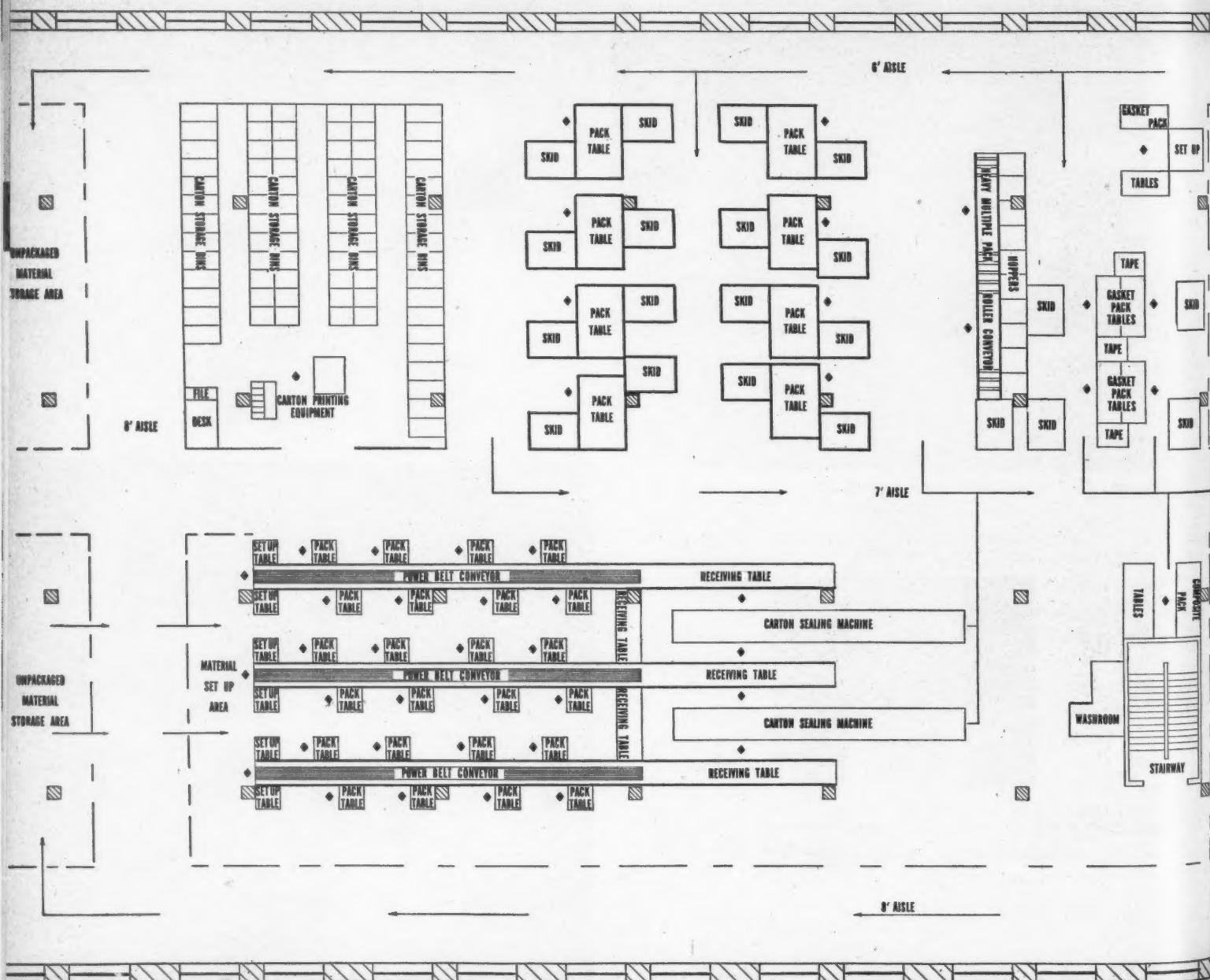
As an aid in explaining the new plan to dealers, a visual presentation of the new base of operations was prepared in the form of a special "X-Ray" booklet

which graphically depicts how the basic work unit may be adapted to any International Harvester dealer's requirements. The booklet incorporates sheets of transparent cellulose acetate film, printed in such a manner that by turning the pages the various units are added piece by piece to the basic plan.

Red, gray and white are the principal colors used in the new I-H dealer buildings and are also the key colors employed on the redesigned line of packages. The red, drawn from the Harvester red, is used in combination with various neutral shades for contrast. Strong, solid colors are avoided in favor of muted shades which give the packages greater individuality and guard against the possibility that certain packages may dominate when a number of them are seen together in the dealer outlet. All colors used in the line are controlled by standardization and coding. Particular care is taken to keep the identifying I-H symbol basically uniform throughout the line, regardless of the printing process employed and the nature of the material on which it is printed.

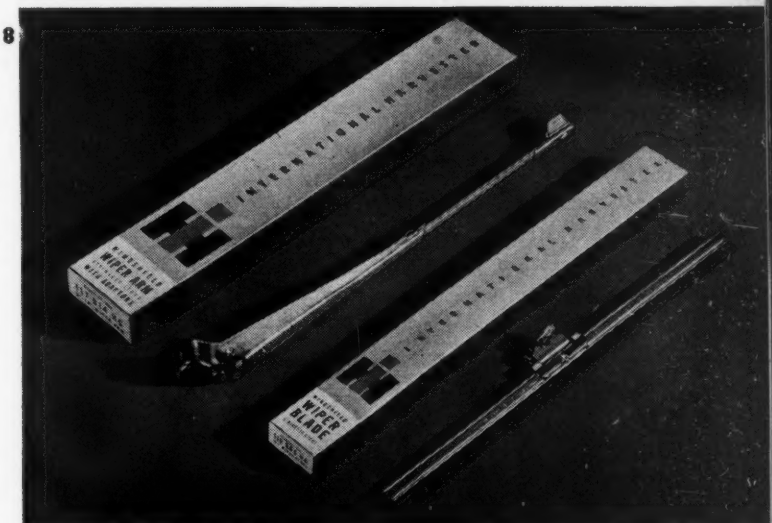
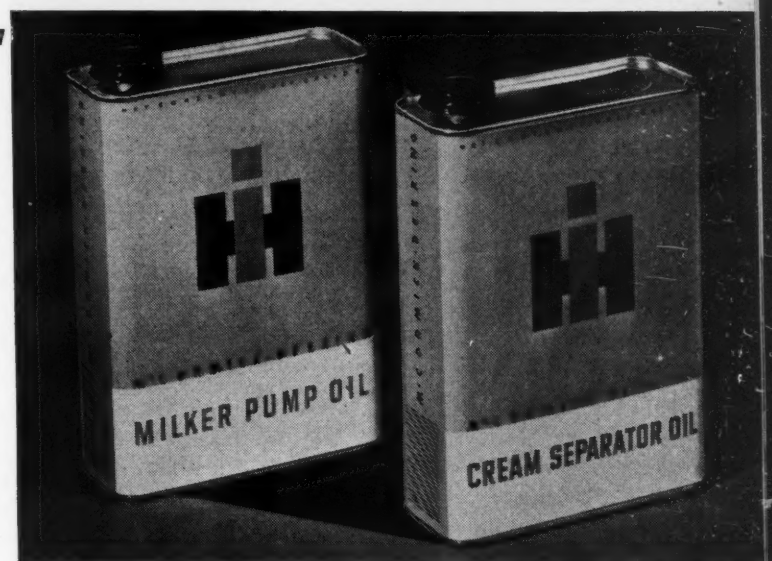
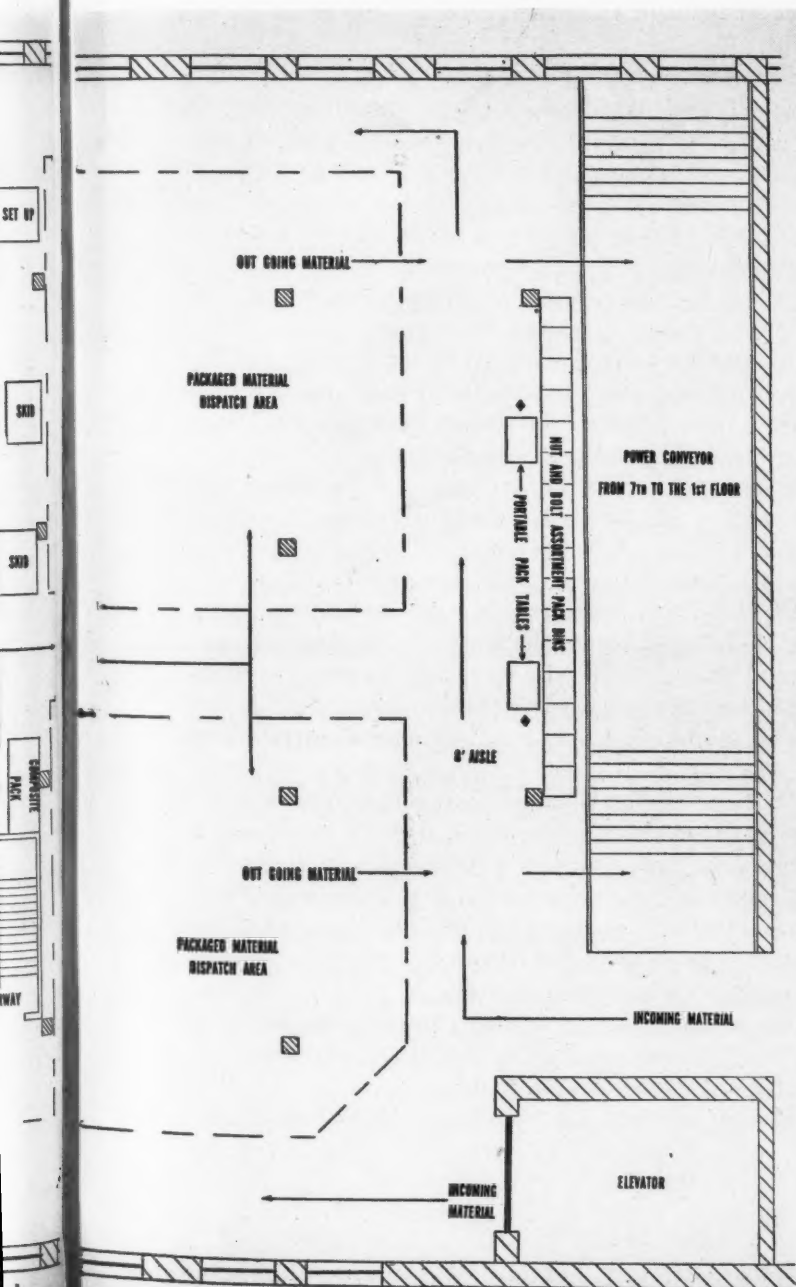
No rigid design relationship was established between the I-H symbol and the company logotype which also

5



goes on each package. Instead, a formula was evolved to permit their combination in a number of different ways, depending upon the size and shape of the individual package. With this flexible arrangement, the somewhat lengthy company name can always be incorporated on the package in a manner which is both legible and pleasing to the eye. This might not have

5—International Harvester Co. typical packaging plant layout facilitates smooth flow of packaging materials and product. 6—Gallon and quart containers for refrigeration oil. Code numbers designate grade of oil. 7—Milk pump oil and cream separator oil, same product used for two purposes, is labeled for one on one side, other on reverse side. Since it is also one of McCormick-Deering line, now part of I-H, trademark is all-inclusive, but McCormick-Deering name appears. 8—Cartons for windshield wiper arms and wiper blades give greater protection to rubber blade than former envelopes. 9—Telescopic fibre tube container with metal ends and pull string for opening, used for magnetic drain plugs. Printed with trademarked label with photographic illustration on reverse side. Black metal ends make smart-looking package.



been the case had a set relationship between these two identification elements been established.

International Harvester realized that the primary function of its packages was to protect the products and get them to the point of sale in good condition. That solved, the matter of a uniform method of piece part identification had to be met. Finally, with the new dealer buildings designed to permit greater emphasis on front-of-counter selling and open display, the packages had to be endowed with proper merchandising appeal.

As mentioned earlier, a number of different methods had formerly been used by International Harvester divisions to mark the packages, leading to a rather confused situation. Under the new packaging program, this difficulty is overcome through the use of multigraph printing on 170 sizes of chipboard cartons. By this method, a slug is made covering the quantity, piece part number and a description of the item within the package. Each plant has its own packaging department for which cartons are imprinted only as required and requisitioned out of the multigraphing and carton storage room so that they arrive in the packaging department at the same time as the parts. Before their arrival the parts have been given necessary cleaning and corrosion prevention treatments. The use of multigraphing provides a much more economical and orderly approach to this identification phase of the packaging program, the company states.

The new International Harvester packaging program is in no sense merely a "face-lifting" project involving labeling only. Numerous changeovers are being made in packaging materials and methods to provide the diverse line of products with better protection than that offered by the prewar packages and to take full advantage of wartime packaging experience.

Baler and binder twine, for example, are two very important products used by farmers. International Harvester sells millions of pounds of these items annually in several different grades. The burlap bags formerly used to package the twines could not be obtained during the war. Study of the problem showed that available multi-walled paper bags offered improved protection, kept the twine cleaner and permitted better identification. Further development of the packaging project brought the improved package designs shown in Fig. 10.

Tuck-flap, self-locking cartons were used before the war for many International Harvester parts. In some cases, heavy items would drop through the bottom when a box was picked up, unless the package had been secured by heavy tape which obliterated identification. A new package provides a glue-seal tamperproof carton with greater protection, particularly for precision parts such as bearings. A greaseproof paper is used for the inner wrap. Increased attention to cleaning and corrosion prevention treatment for metal parts is another feature of the broad I-H packaging program.

Prior to the war, the extensive International Harvester line of liquid products, including such items as



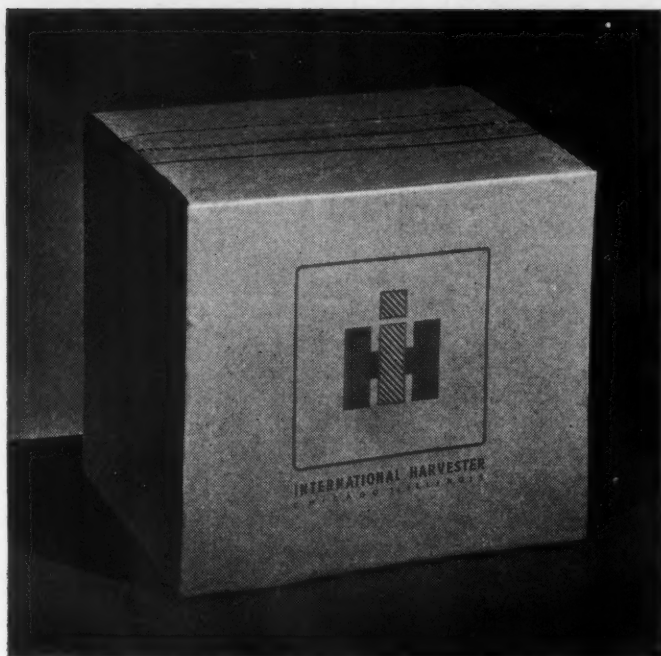
10—Binder twine, formerly in burlap which was not obtainable during war. Multi-wall bag offers improved protection, keeps twine cleaner, permits better identification.

cream separator and milker pump oil, special refrigeration oils and two lines of paints—synthetic enamels and varnish enamels—were packaged in metal containers. Wartime packaging restrictions necessitated a changeover to glass. The liquid products are now being returned to standard types of metal containers, some of which are illustrated in accompanying photographs. Specially designed labels incorporating the I-H symbol identify them.

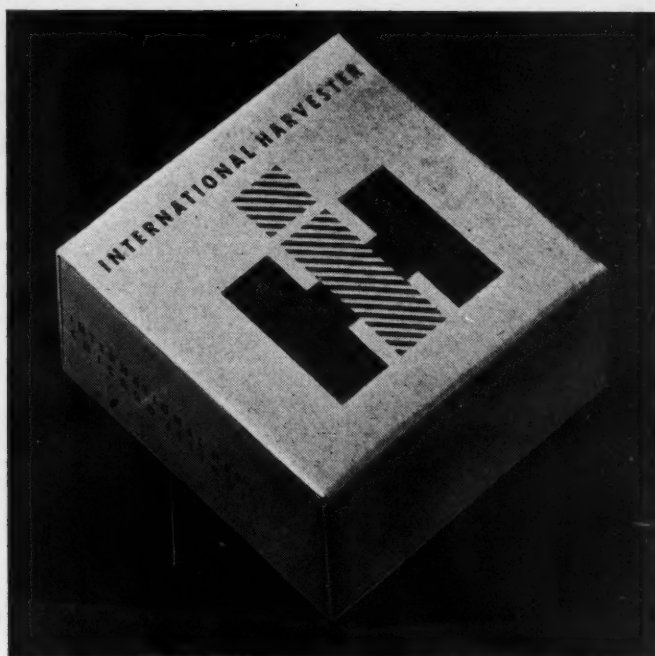
A new type of packaging gives added protection and merchandising value to windshield-wiper blade assemblies. International Harvester formerly sold these items in kraft envelopes, with the blade, wiper arm and two adapter pieces packed separately. The blades were frequently tied up in bundles to facilitate handling, squeezing the soft rubber material out of alignment. Since a perfectly straight edge is essential if the wiper blade is to function properly, the care used in producing the blades was largely defeated by inadequate packaging. Under the revised packaging program, two folding cartons are used, with the blade packaged in one and the complete wiper arm assembly and adapters in the other.

Packages of fibreboard or corrugated paper are employed for automotive heaters and other large, heavy accessories, and standard paperboard containers for the company's complete line of nuts, bolts and rivets. Kit packaging is receiving increased emphasis on automotive accessories and any items replaceable as a unit, such as air cleaner parts and sets of gaskets. In this connection, the matter of getting the proper number of units in the package, for the maximum convenience of the buyer, is under constant study.

Another problem which had to be solved under the



11



12

11—Corrugated shipping carton is printed in one color (red) with a cross-hatched adaptation of the trademark. 12—Chipboard carton, printed on kraft stock, uses multigraphed label on the front. In two colors, red and dark gray, the I-H symbol is handled in one color to avoid the difficulties of close registration.

new packaging program concerned vendor items sold by International Harvester outlets—standard products of other manufacturers which were put up in their own special packages. New packaging standards drawn up by Harvester were passed on to the vendors and they agreed to pack in conformity with them, using packages bearing the characteristic I-H emblem. This phase of the program was worked out so that the vendors are permitted to incorporate within the packages any special instructions or additional information they desire, as long as the exterior of the package meets the required standards.

When the comprehensive new I-H packaging program got under way, the packaging committee held a small meeting attended by several top executives. A preliminary report was made to management and the committee's general recommendations were approved. Then a larger meeting was staged at which attendance included men at the operating level. These men were given the details of the proposed plan. After their approval a third meeting was held at which the project was presented to managers of manufacturing at the various plants and to the men executing the program.

A complete product protection manual sets forth the objectives of the program from the standpoint of protection and clearly outlines how typical packaging operations are to be handled. Compiled by the company's manufacturing research department, this manual lists the primary requisites of packing as protection, conservation of packing material and labor, minimum displacement, identification and marking.

"The effort put forth in producing a precision part or machine would be lost if in some place in the general operations an essential service had not been carefully

planned and would not perform its proper function," states the preface to the manual. "There is a succession of operating procedures and if any one of these is improperly performed, many of the productive efforts are rendered void. Operations in a packing department must be planned and recorded, the same as is done for any other procedures for new or changed products. The packing procedures are of equal importance to the production operations; otherwise the perfection of the production effort will be nullified."

The I-H product protection manual, illustrated with charts and photographs, covers cleaning, corrosion prevention, strip coating compounds, packaging protection, interior cartoning, identification, exterior containers, case liners, outside marking, unboxed parts, etc.

Included in the manual is an explanation of the operations card system established to assure observance of I-H packing requirements. It is estimated that compliance with the provisions will make substantial savings possible without sacrificing quality of product.

To supplement the sections of the product protection manual, specifications and bulletins are issued from time to time covering a specific packaging material or method. These bulletins give detailed information and are sufficiently specific to be used as a guide in purchasing material required under each specification.

Copies of the product protection manual were distributed to manufacturing personnel for peacetime reference, and the booklet is used for reference in the training of all International Harvester packaging personnel.

CREDIT: Complete design program, including trademark, packages, dealer base of operation, Raymond Loewy Associates, New York and Chicago.

# Flowers by air...

in eye appeal packages



2



Flowers were among the first commodities to make use of air freight on a regular basis and they are now well established as a major item in the thriving air cargo business between the West and East Coasts.

Premium-quality flowers are, in fact, a perfect example of a commodity that can profit by air shipment even at the present high freight rates. They are light in weight, extremely perishable and they are produced mainly on the West Coast, far distant from their biggest potential markets. Finally, they are a luxury item well able to bear the extra cost of air shipment.

The superiority of the California climate in producing bigger and better blooms may be disputed by rival gardening areas, but the fact is that there exists in Eastern cities a large market willing to pay a higher price for California flowers delivered dew-fresh, within a matter of hours after they have been cut. Air transportation in this case is the only sound method; without it the market could not exist.

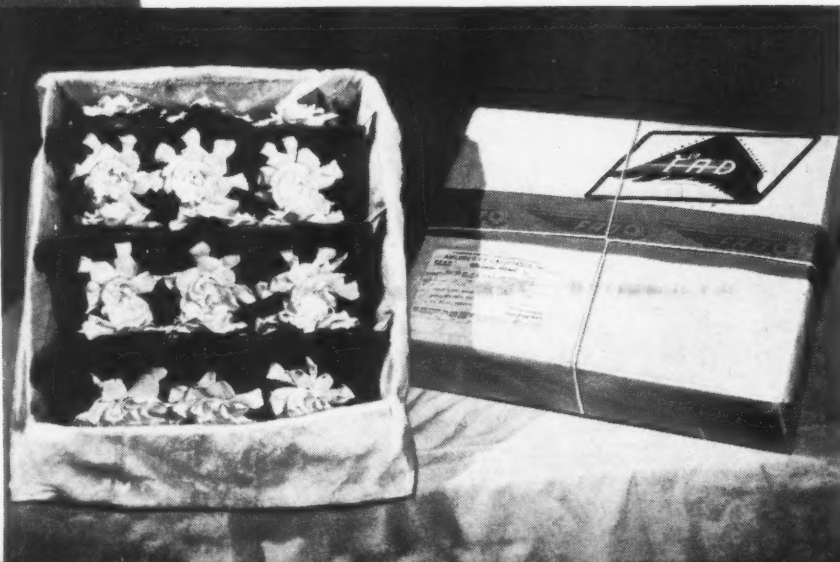
An exotic product naturally lends itself to exotic packaging, and California growers have been quick to see the merchandising advantage in packages which not only play up their trademark but also dramatize the product and its method of shipment.

Just prior to the war, in 1940, Amling's of California,

1—Two gardenias, affixed to foil-surfaced insert board, are packaged with ribbon and pin in die-cut setup box which carries out "Star Dust" brand theme. Window wrap is overwrapped with cellophane. Corsage is ready for delivery to customer. 2—Six gardenias in three-sided tray, covered with printed transparent sheet. 3—Bulk package holds a dozen gardenias in tray, in special foil-board rack. Shipping box, lined with cotton, may hold up to six trays of flowers. Note FAD label and tape on package.

PHOTOS 2 TO 6, COURTESY AMLING'S OF CALIFORNIA, INC.

3



Inc., a large flower grower with main offices in San Francisco and branch operating offices in Los Angeles and Jacksonville, Fla., saw the necessity of better packaging and merchandising of flowers delivered by air. The use of a distinctive label, "FAD—Flowers Air Delivered," was foreseen, not only for advertising purposes, but to insure more careful and prompt handling of these perishable shipments by the airlines. The interest of all the airline companies was aroused with the presentation of the distinctive "FAD" label. Subsequently, a Flowers Air Delivered Assn. was formed.

Since 1940, United Air Lines has conducted numerous experimental flights with flowers from California, trying to improve methods of handling. Most successful has been the use of a cargo "refrigerator," a zippered compartment made of a 1-in.-thick blanket of Fiberglas insulation covered with vinyl-coated Fiberglas cloth and cooled by dry ice.\* With this equipment it has been possible to maintain a constant temperature of around 40 to 45 deg. F.

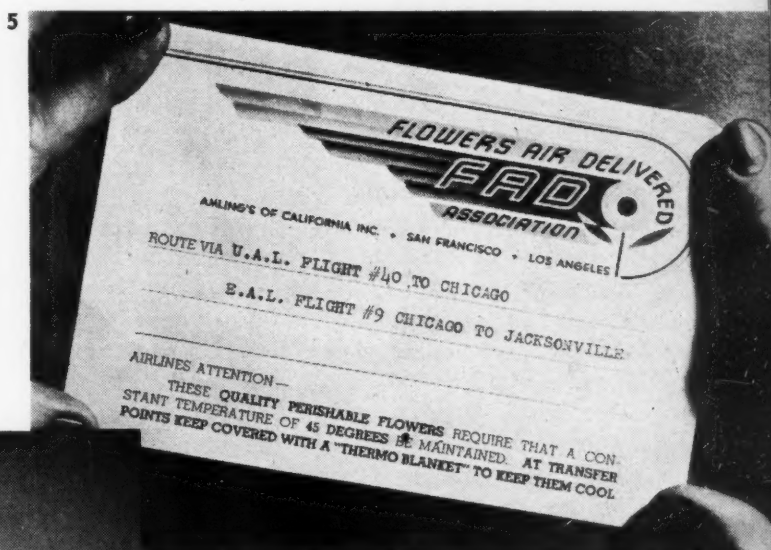
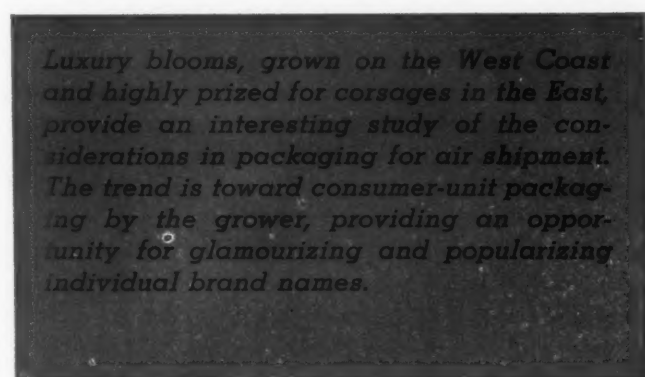
In the meantime, Amling's of California was diligently working on new FAD box designs and new pack-

aging ideas. The first distinctive package was for the "Star Dust" gardenia corsage (Fig. 1). This container was designed to accomplish four purposes: to insure dewy freshness and sealed-in fragrance, to be rigid enough to withstand handling by the florist and his flower customers, to hold the flower itself rigidly in place to prevent bruising and, finally, to present the product in an attractive setting. All of these important aims have been accomplished. Thus, the retail florist receives his flowers ready for sale with a minimum amount of handling and he provides his customers longer-lasting blooms.

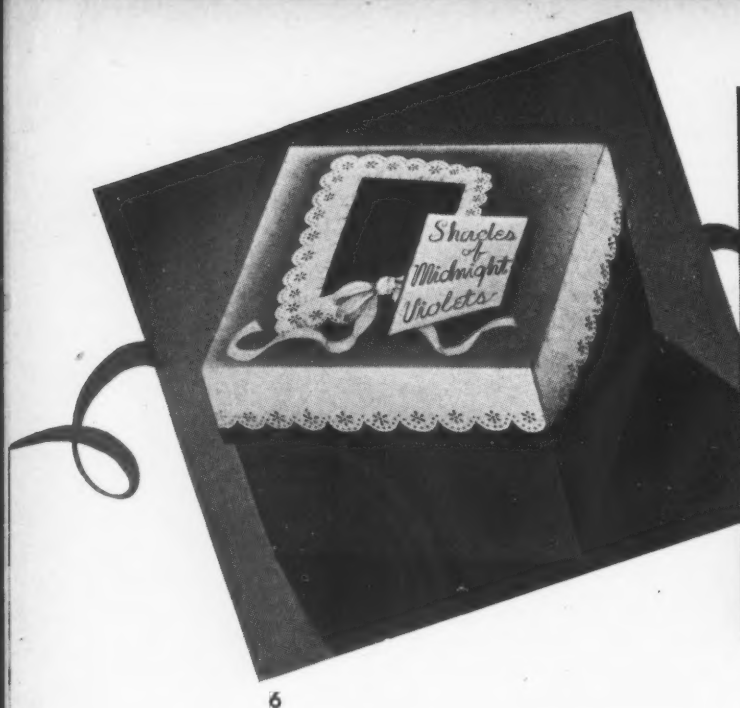
Today, when a florist in the East sells "Star Dust" gardenia corsages, he delivers two of the finest blooms California can offer, joined by attractive bow with a pearl-tipped corsage pin attached. This is encased in a box of modern design sprinkled with tiny gold stars. A large modernistic star has been die-cut to give a glimpse of the flowers through the top of the paperboard set-up box and the entire package is sealed with moistureproof cellophane.

Another gardenia package for bulk quantities (Fig. 3) has recently been perfected. It consists of a tray or a stack of trays made of thirty-point fibreboard lami-

\* See "Refrigerator for Perishable Air Cargo," MODERN PACKAGING, September, 1945, pp. 110-111.



4—Rare orchids, nested in glass wool with stems in tube filled with preservative liquid, are packaged in this lightweight but highly decorative box. 5—Special FAD shipping label, playing up "air delivered" theme, gives specific flight routing to expedite handling, with added instructions about cooling.



6



7

6 and 7—Roses and violets benefit by glamorous brand names, decorative cellophane-overwrapped window boxes.

nated on both sides with aluminum foil. The outside foil lamination is left plain and uncolored for its ultra-violet ray resisting qualities. The inside foil, next to the flowers, is lacquered in shades of soft green, to set off the flowers to best advantage. Another sheet of the same foil-fibreboard is scored and die-cut with the proper notches and slots, so that when it is set up inside the tray it forms three ridges of triangular cross-section, into which three gardenias are inserted on each face. One tray thus holds a dozen gardenias, each individually held and protected from contact. Each tray is covered and sealed with clear cellophane. Four, six or eight of these trays may be shipped in a special outside container made of foil-corrugated laminated board.

After many favorable comments had been received on the "Star Dust" packages, Amling's went on to package other delicate flowers. Naturally, the costly orchid was uppermost in their minds. The luxurious "Purple Masque" orchid is hybridized, thus producing a very large, beautiful bloom. The normal growth for these glamor orchids ranges anywhere from seven to ten years.

Contrary to general opinion, the orchid is not necessarily a short-lived bloom. With proper handling it is a very sturdy flower and may be worn for three or four days, still retaining its fresh, delicate appearance. The problem, then, was to design a package that would insure proper protection in transit, supply the flower with sufficient moisture and present the florist with a box suitable for display purposes, hence avoiding unnecessary handling.

It was found that by gently placing the orchids in soft spun glass, inserting the stem in a rubber-capped tube of ice water, chemically treated, and fastening the flowers securely to the bottom of the box (Fig. 4), "Purple Masque" orchids could be shipped by FAD to

any point in the United States and arrive in perfect condition. A box is now under construction for an orchid corsage, complete and attractively packaged for resale purposes.

In addition to packaging the many other delicate corsage flowers, such as camellias, roses, etc., Amling's have done a great deal of research on the proper method of packing and packaging all types of commercially grown cut flowers, such as calla lilies, heather, violets, acacia and chrysanthemums.

Up until a few years ago, violets were wrapped in vegetable parchment paper in individual bunches, iced and packed in waxed cartons. Today, Amling's "Shades of Midnight" violets (Fig. 6) are something to behold. Arranged in neat rows, these fragrant bunches are placed in foil-lined boxes of laminated board, slipped into a cellophane jacket, sealed and are ready to be placed in a larger outside box, built to withstand handling in transit.

This method of packing by the grower saves the retail florist much time and, again, the flowers are spared unnecessary handling. The florist merely removes the outside box and his violets are ready to be placed on display adding eye-appeal to his glass-fronted refrigerated showcase.

All of these new box designs have originated and have been developed in the home office of Amling's, in San Francisco, where research and experiments are conducted for the betterment and advancement of the entire floral industry.

The new FAD shipping cartons have special tapes and outside wrappings, so that the shipments are given extra protection and also are pleasing to the eye. Each FAD shipment is routed before it leaves the packing department, and this routing label with the "FAD—Flowers Air Delivered" insignia (Fig. 5) is attached to



8

8—McLellan packages six corsage gardenias in tray with basket handle, wrapped in cellophane. Tray is die-cut on bottom as shown to hold stems of flowers. Two trays are packed in suit box, specially labeled. 9—Showing how McLellan trays are slipped into cellophane bags. Bags are heat-sealed. 10—This branded package used by William Zappettini Co. holds 24 gardenias, individually secured.

the outside of the box for the convenience and instruction of the airlines. This special service is another time saver.

Air delivery of flowers has been steadily increasing since about 1932, when a shipment of cut flowers was made on Mother's Day from Los Angeles to an Eastern market. Prior to this, many experiments had been conducted with cut flowers and other perishable commodities.

In 1936, about 120 white-crown flower leis were air-delivered to Los Angeles from Honolulu. In this same year, a consignment of orchids was flown from England to New York and on to Boston to be exhibited at the Seventh Annual Orchid Show in that city's Horticultural Hall.

In 1938 Luise Rainer, of movie fame, had a peach tree air-delivered to Madame Chiang Kai-Shek in Shanghai, China. Flowers were flown to the Golden Gate International Exhibition for exhibition purposes. Dozens of rare vanilla orchids were flown to Kansas City from the Hawaiian Islands in the latter part of 1939.

During the war, naturally, air delivery of flowers was curtailed. However, experiments were still carried on and postwar plans were being made. The cooperation and perseverance of various Railway Express Agency officials in speeding up schedules and effecting prompt delivery from airport to the ultimate destination have been very important factors in this air-speed program for the flowers.



9

10



The use of cellophane in preparing and packaging flowers for shipment has been very successful. Ambling's has installed machines to produce the various sized cellophane bags they handle in the tremendous packaging volume.

With the combination of good packaging and FAD service, the life of flowers has been prolonged and the retail florist receives his luxury merchandise in perfect condition ready for immediate sales. The flower-buying public gets quality, beauty and modern packaging.

CREDITS: (Ambling packages) Designs by Floral Fashions, Inc., San Francisco; boxes by Andre Paper Box Co., Fleischhacker Paper box Co. and Royal Container Co., all of San Francisco; foil laminated board by Reynolds Metals Co., Richmond Va.; spun glass by Owens-Corning Fiberglas Corp., Toledo, Ohio.



1—American Bemberg for years has done an outstanding labeling job with specific label information for washable dresses, dry cleanable dresses, piece goods, etc. 2—American Viscose is also a leader in presenting all the facts a consumer wants to know about Crown Tested rayon on labels similar to the ones illustrated here.

## Textile labels . . . the retailer must still be educated



2 Such things as this happened back in the '20s. Mrs. Jones was hurrying to go to an afternoon bridge party. She went to the closet to get that new blue crepe only to find it sadly in need of pressing. Hastily she heated an iron. Her dress would be neat in a jiffy. She ran the iron over the fabric but, alas, where the iron passed over the dress there was only a big, nasty hole!

Nearly every woman had experiences like that with the first synthetic fabrics—using too hot an iron because she did not know that these fabrics were thermo-plastic and would melt under too much heat.

It didn't take many such instances for manufacturers of those fabrics to get busy on educational campaigns to inform consumers how to take care of them. In these programs, even the manufacturers of electric flatirons were induced to make irons with proper heat controls for handling such materials.

From the packaging angle, the answer for this educational campaign was proper label information about how to care for the new fabrics.

During the last 20 years many fundamental changes have taken place in the textile and related industries. Previous to that time, when most textiles were produced from basic animal and vegetable fibres—cotton, wool, silk and flax—the buying and selling of commodities made from those fibres was quite simple.

Today, however, there are rayon yarns, made by a number of companies, each with its particular qualities—filament and spun rayons, high medium and low tenacity yarns, and yarns in a broad range of deniers.

Soon on the market in large quantities will be other man-made fibres and yarns: Aralac, Nylon, Saran,

Velon, Vinyon. Finished cloth from each of these products has its own characteristics which must be interpreted to the consumer and to the trade. Each will do certain things and will not do others. Each requires specific care in use by the laundry and, by the dry cleaner, and such care must be understood if the purchased product is to give consumer satisfaction.

Finishes will impart waterproof or water repellent qualities, will give crease and stain resistance, will keep the cloth from shrinking, make it mildewproof, fire retardant, give increased tensile or abrasive strength and other qualities. Increased use of synthetic resins and cellulose finishes will help to replace fugitive starch sizing. Improved dyes are providing fast colors—fast to light, fast to washing.

These developments are adding greatly to the textile vocabulary that the average retail sales person and the consumer is required to understand. The problem is baffling even to the textile expert and far too complicated for the average person in a ready-to-wear department or the average retail store customer to understand.

Even more confusing is the fact that many new fabrics are still being described in terminology which has always been associated with the pre-synthetic era of the textile industry.

A satin fabric, for instance, may be made of silk or of rayon. It may be composed of viscose and acetate rayon, or it may be a blend of viscose, silk or acetate rayon. A broadcloth may be a silk fabric, a woolen fabric, a rayon or a combed or carded cotton cloth.

Twills, taffetas, chambrays, coverts, venetians, serges and gabardines may be any one of hundreds of blends and constructions.

In addition to this confusion, there were something like 70,000 registered trademarks in the textile and apparel industries before the war and the next few years

will see the introduction of a great many in addition.

The main object in classifying all of this information into the proper categories, of course, is to give ultimate consumer satisfaction. Without that, neither manufacturer, converter, finishing plant, garment maker nor retailer can benefit in this whole current era of synthetic textiles. Many cooperative educational campaigns are in the making. Notable is the cooperative plan for informative labeling of textiles just proposed by the National-Consumer Retailer Council which takes into cognizance every angle of the problem.

A committee of the Assn. of National Advertisers is preparing educational material to assist national advertisers of manufactured products in carrying out educational programs about good labeling for co-operation with women's clubs and consumer groups.

From the packaging standpoint, however, the problem resolves itself into a matter of good labeling. The first part of such labeling begins with the manufacturer's name and the trade name of his product. In the last few years, manufacturers of synthetic fibres and yarns have spent large portions of their advertising budgets to promote the trade names of their basic materials. Celanese, for example, has spent millions to win the confidence of American women in fabrics made of this material. Bemberg has done likewise. National Dairy with its current advertisement running in a large list of consumer magazines, "Meet Daisy, my Dress-maker!" is telling the story of Aralac—the yarns spun from the casein in milk. The Bakelite Corp. at its recent style show for fashion editors, showed the new shoes, raincoats and other products made from its product, Vynlite, as the beginning of a broader program to associate the trade name with the materials. There are many others in this new field doing likewise.

When it comes to putting the trade name before the

3—Garments made of Celanese are well identified with tags which have directions for washing, cleaning, ironing, etc. on the reverse side. Sew-on labels assure trade name staying with garment until it reaches consumer.





4—Aralac labels are doing a good identification job. National Dairy plans redesign program to incorporate more informative features. 5—Du Pont is favored because of national clamor for Nylon. Retailers are so eager to have Nylon products, there is little chance of any Nylon product being sold without the Nylon label.

consumer, however, there is no other way to do it but with that tag on the garment that says Celanese, American Viscose, Bemberg, Aralac, Nylon, Vinylite at the point of sale. Legal requirements, of course, demand that a fabric containing a certain amount of synthetic fibres be so labeled, giving the percentage of such fibres—say, 30% rayon, 60% wool, as the case may be, but this does not always assure labeling of whose rayon it is. Nylon, of course, is fortunate in this respect, because legal information assures that the fabric or garment be designated as made of Nylon. Since du Pont is the only company that makes Nylon, the company benefits by this protection. In the case of companies who make rayon, however, it does not always assure labeling of whose rayon it is, unless a company has entered into agreement with processors or garment makers to have its trademarked labels on the finished products. Another fortunate situation for Nylon is the tremendous, pent-up, popular demand because civilians could not have this yarn during the war. Any retailer who has anything made of Nylon is more than anxious to have it so labeled. This may not always be the case, however. New fibres are being made—some that, it has been said, may even give Nylon a run for its money in the hosiery field. When that time comes—if it should—it will be more important than ever to keep trade names before the consumer and to give label information that will help her to get greatest satisfaction from the product.

How to assure its getting there means close cooperation right through every stage of production until the tag is put on by the garment maker and stays there

until the garment is purchased in the retail store. The National Consumer-Retailer Council believes that its labeling program is based on such close cooperation so that an improved label will remain on the garment until it gets into the hands of the ultimate consumer. A valuable service of this organization, too, is a series of outlines of essential data and how it may be presented on improved labels. These outlines cover more than 20 different classifications of products in the textile and garment field. These outlines offer valuable guides to manufacturers in planning their labels.

Manufacturers of the synthetic yarns and fibres on the whole have done an excellent job of preparing these labels and of supplying them by the millions to the trade. Usually the procedure is like this. The garment manufacturer signs an agreement with the manufacturer of the yarn or fibre, the finisher or converter to use one of his labels on every garment he produces of that material. The garment trade has been quite cooperative in putting on the labels, but the place where the education is needed is with the retail merchant. Stores have been reluctant, say the textile manufacturers, to leave anything on their merchandise but their own store labels. Hence, many of the good labels for which the fabric manufacturer has spent time and money are removed when the merchandise reaches the store. The problem has been partly solved by having the labels printed, insofar as possible, with the store's name in addition to the information about the manufacturer. This is practical in some cases, but is not an overall rule to cover the small retail outlets.

Broad educational programs are still necessary to

convince retailers of the need for leaving the manufacturer's informative data with the merchandise. In the coming synthetic era, he must be made to realize that these labels are going to mean the difference between satisfied and dissatisfied customers. They can cut down returns of goods ruined because they were washed when they should have been dry cleaned, ruined because of shrinking or other disasters which would not have occurred if the customer had received on the label the correct information in the first place.

Manufacturers of the fabrics have achieved some success in keeping the labels on the garments until they are purchased by the ultimate consumer by using sew-in type labels. A tag and a string is easier for the store to remove than a label sewed in the garment.

Whether the garment looks like chambray or taffeta, whether it's an evening dress or baby pants, if it is made from synthetic fibres by a well-known maker, it is an advantage to the whole merchandising cycle to have his trademark tag there. It is not only the customer's assurance of what the garment is made of, but it is the textile manufacturer's only opportunity to give her on this trademarked label all the information she needs for caring for the garment and what performance she can expect of it. For example, if she buys it and expects it to be waterproof and the material is not waterproof, then she is lost as a customer forever. A label describing the water repellent qualities, however, might have avoided this dissatisfaction. If a fabric must be washed a certain way, the label should tell how. If it

will not shrink, then the label must say so. If the colors are fast to light or washing, the customer wants that information. If the synthetic fibres are combined with natural fibres, such information should be given about the construction—say rayon and wool, or rayon and silk. Usually, if the label contains, say more than half synthetic fibres, the maker of those synthetic yarns has the privilege of trademarking the material and identifying the percentage of his material woven with the natural yarn.

An essential part of all these labeling programs is an enlightened public which will insist on information at the point of sale about the products they buy. American Bemberg Corp. has been most progressive in conducting, through its educational service bureau, a program for calling the consumers' attention to the need of such information and backing up this educational program with labels that carry all the essential information to assist a sales person in answering customers' questions intelligently and accurately and that also provide the customer (Continued on page 170)

6—Legal information on a label must include the percentages of various fibres used, but such information does not help the consumer in caring for the garment.

7—Front and back views show a few more examples of how synthetic textile labels are used to present information.





## Candies with oomph

"Luisa" candies, long well known in Europe, are being made now in New York by Armando Spagnoli, one of the family which started making these confections on the continent.

In addition to supervising production, Mr. Spagnoli himself designs all of his boxes. He dresses them up with pieces of felt applied by hand to form feminine figures in colorful fancy dress, each appropriately named. The one in the upper left-hand corner, for example, is named the "Merry Widow;" others are called "Josephine," "Peggy."

His latest design is a suede-covered box elaborately trimmed with huge bows of satin ribbon and a plastic flower which can be removed and worn as a lapel decoration. To avoid crushing the ribbons and flowers, a corrugated box several inches deeper than the candy box itself is used as outer packing. Corrugated fillers are used for extra protection.

Until now, Mr. Spagnoli has introduced only one or two new box designs each year. No design is discontinued once it is introduced; quite a feat considering the materials shortages of the past few years, but re-orders have justified the continuance of each. With the greater availability of materials and retailers clamoring for candies not only in the \$2 to \$8.50 per lb. range which he has been supplying, but in ranges up to \$15 per lb., plans are afoot to increase design activities for the future. Mr. Spagnoli anticipates the use of metal boxes as well as some covered with leathers and brocades.

## Picture directions

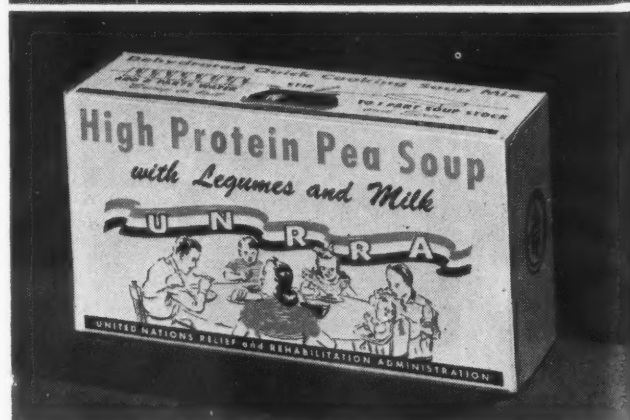
The Flavor Service Corp., in cooperation with the United Nations Relief and Rehabilitation Administration and the Dept. of Agriculture, has developed a special package and folder for the "High Protein Pea Soup" going to Europe for relief feeding.

Need for improving this type of package was recognized when UNRRA revealed that one of the greatest difficulties was to make the European people understand how to use the foods.

Printed in red and blue, the carton is vertical on one face, showing a working man to prove that the soup is nutritious enough for a husky worker. The face illustrated, attempts to prove that the food is good for the entire family as well. Side panels give directions in seven languages as well as graphic directions.

The folder included in the package also gives multi-language directions as well as graphic ones. Having investigated to determine what foods are available in the ravaged sections of Europe, Flavor Service has developed pictorial and graphic directions for adding these foods to give the soup variety.

CREDIT: Cartons, Atlas Boxmakers, Inc., Chicago.



# HISTORIES



## Luxury for the bath

Utter simplicity is the basis of design for these new packages for Roman Bath Oil, a product of Mary Chess. Rich cream and dark brown form the color scheme and all trimmings are kept to the irreducible minimum. The two telescope boxes for the two sizes of bottles are fashioned after ancient Chinese pillboxes, while the vials are packaged in easy-opening cartons of the type used for luxury cigarettes.

The bottles fit snugly into the base of the boxes so that they need not necessarily be removed while in use.

Just enough of the bottle extends over bottom portion of the box to allow the label to be read with ease. The labels are a decal-type called Tranvision labels which are transferred to the glass but the backing remains instead of slipping off. The cord with the slip bead closure keeps the package closed firmly while on display or on the bathroom shelf.

CREDITS: Vials, Kimble Glass Co., Vineland, N. J. Caps, Coll's Patent Fire Arms Mfg. Co., Hartford, Conn. Labels, H. P. Bender, The Palographia Co., N. Y. C. Large boxes, Linden Bozcraft Co., Brooklyn, N. Y. Boxes for vials, The Warner Bros. Co., Bridgeport, Conn. Beads, Max Herman & Co., New York.

## Swedish bag

The Continental custom of carrying small packages by a loop of string over the finger or wrist undoubtedly inspired this patented merchandise bag manufactured in Sweden. This one, however, has the carrying handle built right in as a part of the complete bag which serves to cut down on both labor and time at the point of sale.

When the bag is seamed along the center back, the paper loop is fastened inside the seam as part of the same operation. The raw edges are hidden between the two layers of paper and the rest of the loop extends through a diagonal slash; making a sufficiently strong handle for lightweight articles such as hosiery or handkerchiefs.

The top of the bag has the conventional double lip which folds down over the body to protect the merchandise. But in this case, both the body and the lip are die-cut with two small oval openings through which the strap is slipped as shown at the left, thereby forming a "lock" for the bag.

The face of the bag offers unlimited advertising and promotional possibilities. The one illustrated is decorated with wavy yellow lines in a tweedy effect used as the over-all pattern while the name of the company appears in reverse on a black background.

CREDITS: Patented by S. Hammer A. S. Papirindustri, Oslo, Sweden. Also manufactured by A. B. Akerlund & Rausing, Oslo.



# Foil bread wrappers... trial runs and storage tests



1—Foreground: foil wrap planned before the war for Soderholm Baking Co., Bridgeport, Conn. It's foil laminated to waxed paper, printed in one color. Background: foil end labels and bands give eye appeal.

**T**est runs of foil bread wrappers are going through all types of standard wrapping machines in several large up-state and New York bakeries.

Twenty-five loaves wrapped in foil were recently put on test display in a Westchester food store alongside regular commercially wrapped loaves of bread. In an hour the 25 foil wrapped loaves had been sold.

The return of aluminum foil for civilian use is inspiring new experiments in this field that were interrupted by the war situation of foil.

The tests are being conducted by a leading designer in bakery packaging, the supplier of the foil wrap in cooperation with the bakeries interested.

The original idea behind the use of foil for bread was purely eye appeal. It was not tried before the war as a protective wrapper, but only as a merchandising idea which would give bakers of specialty breads an added attraction at the point of sale.

To prove the efficiency of a foil wrap, however, the originators of such a wrap have to show conclusively: (1) that a foil wrap will keep bread as fresh for as long or longer than other types of wraps; (2) that a foil wrap can be handled satisfactorily on existing bread-wrapping machinery; (3) that the cost of such a wrap will not be prohibitive.

The wrapper being used for the tests is a combination of a very thin gauge foil laminated to waxed paper. The wax, a special blend, serves as the adhesive to combine the foil with the paper and as the heat-sealing agent for the wrapper. By using the thinnest gauge foil, the cost of the wrapper can be kept within limits which are practical for a bread wrapper. It is being recommended for specialty loaves selling for 15 cents a loaf and over. Printed in one color, the cost averages only a few mills per wrap above the cost of other specialty bread wrappers in use. The cost also depends, of course, on the volume of bread to be packaged. More than one color printing is not recommended because the foil is considered sufficiently attractive in itself to make this unnecessary.

Many bakers, who need the merchandising appeal of something new for specialty breads, something to suggest high quality, are giving this type of wrapper serious consideration.

To improve the sealing properties of the wrapper,  $\frac{3}{4}$  inch of the waxed paper is left at each edge of the roll with no covering of foil. By this means, the two waxed surfaces seal face-to-face across the bottom of the loaf and provide waxed surface for sealing against the foil.

In spite of the fact that the foil wrapper was origi-

nated only for its advantage of added sales appeal, the results of the test runs are indicating very interesting protective qualities of foil.

Fifty loaves were taken from one of the wrapping machines and stored in ordinary room temperature. They weren't touched for three days. Then a few were opened on each successive day. It was 12 days before any mold appeared and this was mostly in spots where the foil was scuffed. There was little shrinkage of the loaves wrapped with foil in comparison with loaves wrapped in other materials, which often show shrinkages of  $\frac{1}{2}$  to  $\frac{3}{4}$  inch in length and an inch in height after a few days. The foil-wrapped loaves after 10 days were edible, fresh and had the same fresh smell they had when they left the oven. The same results were obtained with samples taken from other test runs, similarly stored and opened on successive days. Tests made before the war, even during hot, humid summer weather, produced the same results, it was stated.

The greater moisture resistance of the foil backed with paper, it is believed, does not cause bread to mold faster, but actually retards it. The group which is making the tests believes that the property of the foil to keep out light may have some effect on retarding mold growth, and also may assist in maintaining the freshness of the bread, since absence of light retards rancidity. If it is true that bread must "breathe"—that the wrapper must allow some transmission of moisture and gases—then the theory is that there must be sufficient opportunity for such transmission in this foil wrapper through the end folds, which are a tight seal, but not moisture- or air-proof.

These tests are not to be considered conclusive, the promoters of this wrap say, but they believe that the results so far indicate that foil for bread wrapping has protective advantages equal if not better than other wraps—plus the added advantage of eye appeal. They are most anxious that foil wrappers be marketed properly from the start. The eye appeal will unquestionably make a first sale, but it will not mean a repeat sale unless the product in it measures up to the wrapper. They are interested in selling it only for wrapping bread of known quality. They know that foil on poor quality bread would kill the wrap forever.

This foil combination for bread-wrapping has been

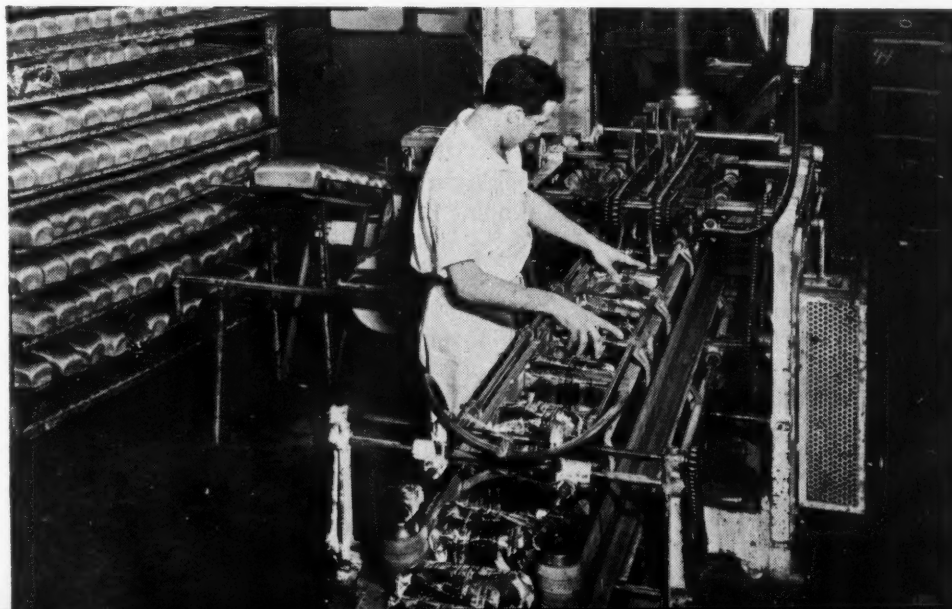
used for trial runs on all standard types of bread-wrapping equipment. In every case it is reported to have handled beautifully without any adjustment of the machines. There was no change made in temperature control for sealing the loaves and the machines were run at maximum speed. One reason for its effective handling, it is believed, is the smooth surface of the foil on one side of the sheet. This smooth surface slides through the machine with the greatest of ease and with no tackiness since no waxed surface except the very edge of the sheet without the foil touches the equipment. No wax touching the machines also means less deposit on equipment and less cleaning.

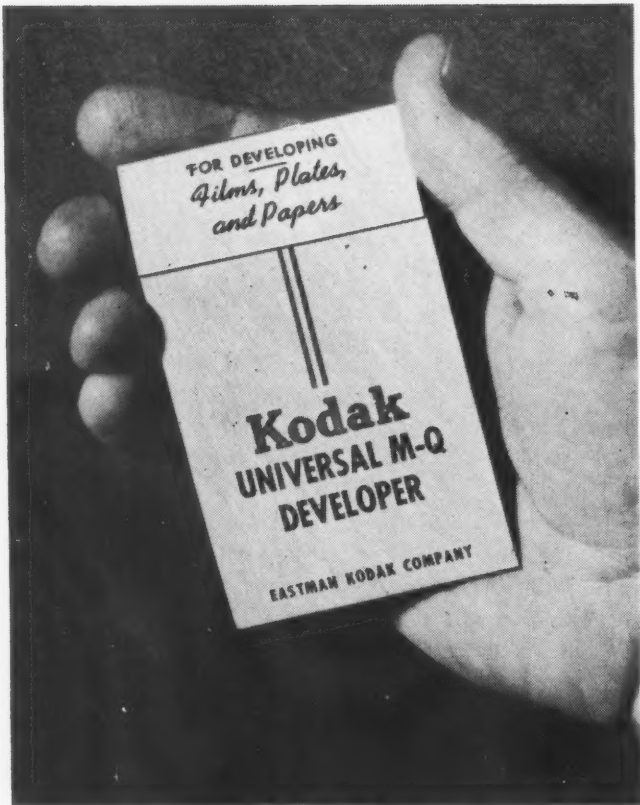
The packages, themselves, are neat in appearance particularly because the foil will produce what is known as a "dead" fold. There is a certain tendency of springiness to a fold of waxed paper or cellophane, it is said. When the waxed paper is combined with foil, the fold does not tend to spring back to its original position. The packages will stand up under the usual handling through distribution, although there may be some tendency of the foil to scuff. Test handling, however, did not show this to be troublesome. The wraps will endure the usual pinching to see if the loaf inside is soft. Even the crinkling of the foil does not impair attractiveness, since the foil still retains its glistening quality. Colorful effects are possible by using transparent lacquers over the foil, although it must be remembered any such treatment, of necessity, adds greatly to the cost.

One of the first companies which had planned to use this wrap before the war was the Soderholm bakery in Bridgeport, Conn. They had their first shipment of foil on hand, but due to the material situation, the procedure had to be abandoned for the duration. Foil for bread wrapping is not an entirely new idea. Europeans remember dark loaves, rye and pumpernickel, wrapped in foil before the war—particularly in Germany where these types of loaves were kept in foil indefinitely. Current experiments in this country indicate renewed interest in foil for the baking industry.

CREDITS: Wrap created by Mildred C. Lucas, of Timely Packaging Association, New York. Laminated and printed by Standard Rolling Mills, Inc., Brooklyn, N. Y.

2—The foil wrap is reported to handle well on all types of standard bread-wrapping equipment. Test runs required no change in sealing temperature and machines were run at maximum speed, it was said.





1



2

1—New M-Q Developer package resembles a match book, printed in black and red on famous Kodak yellow. 2—Inside are two heat-sealed, laminated foil envelopes holding the two powdered chemicals. Inspiration was the moistureproof, heat-sealing envelope used for soluble coffee and lemon powders in the Army's Ration K.

## Developer packs . . . first under new Kodak plan

The first Kodak package planned and developed under Eastman Kodak Co.'s new coordinated packaging program is now on the market. It is a new packet for Universal M-Q Developer. The instant success reported for this package is a striking demonstration of the value of comprehensive package development, such as Kodak adopted during the past year.\*

The problem called for a mechanical production pack for M-Q developer which would be compact, moisture resistant, attractive, easy to use, easily dispensable and which would increase sales.

Until the demand for new packaging of M-Q Developer arose, Kodak had packed the M-Q chemicals in little glass tubes. The tube was divided into two sections by means of a cork disk at the center and sealed with corks at each end. A reasonable degree of moisture resistance was obtained by dipping each end cork in wax. A full wrap label was applied to the glass tube and five tubes were packed in a folding carton with paperboard separators. However, the faults of this had been many. It was expensive; the filling and seal-

ing were done by hand. It was inefficient, since the cork closures were not always right and the paperboard separators in the carton did not always prevent breakage. Removal of the corks was inconvenient for the consumer. Dispensing was a difficult problem to the dealers. In addition, the package was seriously lacking in eye appeal.

The first step in devising a new package under the new Kodak package development procedure was to determine all essential requirements by means of check lists from the four basic sources of information concerning packaging: manufacturing, package supplier, sales and advertising, and trade.

Merchandising check lists showed that the product was sold in substantial quantity, several million units per year. A reduction in unit selling price would be desirable for competitive reasons. Dealers usually displayed the product on the counter and preferred a space-saving counter dispenser. The average unit of sale was from one to six packages per customer. Consumers wanted a package that was easy to open, yet provided adequate protection if they kept the product over a period of time before using it. An unbreakable

\* See "35,000 Kodak Packages," MODERN PACKAGING, Oct. 1945, pp. 91-100.

container would also increase the consumer acceptance.

Check lists supplied by the production staffs indicated that a special type construction was required for the new package. The product is a two-powder chemical and inasmuch as the two powders in dry form are incompatible, a two-part package was necessary. Protection had to be provided against moisture-vapor transmission, light, dirt and chemical change. The design had to be such that the product could be produced at low cost. It was also advisable that the packaging materials occupy a minimum of storage space preceding the filling operation. Finally the same package would have to serve for both domestic and export shipment.

An important phase of this development and preparation was testing. The check lists indicated what should be tested. Market tests, trade surveys and dealer questionnaires determined merchandising and consumer factors. Proving Room studies determined the efficiency of the package from such standpoints as protection, handling both in production and in distribution.

After all these data were collected, the packaging divisions, Package Design Service and Physical Package Service, each anticipating the scope and limitations of the other, were prepared to make their final recommendations for the completed package.

Inspiration for the new package was a war baby—the hermetically sealed envelope which had been used so advantageously by the armed forces for unit packaging of coffee, lemon powder, lemon pudding, etc., as components of the famous K-Ration. After necessary research proved that such a package, with a few important changes could be adapted to the M-Q Developer package, complete specifications for the new package were drawn up—General Package Specifications providing a concise description of the over-all packaging job and covering descriptions of inner packing, unit packing, intermediate packing, inserts and shipping cases. Detail Package Specifications then supplemented the General Package Specification and covered given dimensions, raw material, performance standards, sources of supply and any other pertinent data about the container, label, etc. Detail specifications were further supplemented by Raw Material Specifications, stock lists, etc.

Once all of these specifications were approved by all concerned, they provided the final word as to how the job was to be done and the instrument by which the package could be produced and controlled.

The new M-Q Developer package made to these specifications consists of two packets formed from 0.001 aluminum foil laminated to 100 Kodapak—the company's own cellulose acetate packaging film. A thermoplastic vinyl coating on the foil provides the means for heat sealing the seams of the envelopes, which are automatically made and filled on a Stokes & Smith machine. The two packets, filled with powder, are clipped to a printed paperboard folder, similar in appearance to a match folder. The front flap identifies

the product with brand and tradename while instructions for use are printed on the back. The folder is printed black and red on the famous Kodak yellow in accordance with the company's standard family packaging design.

One hundred of these packets, packed in a display carton with dispensing feature, assure the dealer a convenient counter unit printed in the identifying Kodak colors and carrying sales messages and instruction information. A corrugated board inner packing protects the individual packets from damage and gives rigidity to the carton. The carton is compact so that it takes up little counter space, yet all sides do a merchandising job. It is expendable when empty.

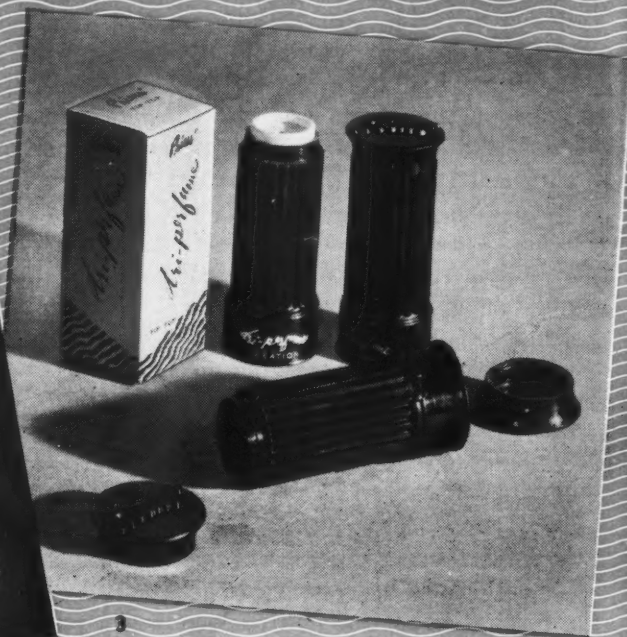
The advantages of this kind of package planning are indicated by the benefits derived from this package change. These included retail sales price reduction of from seven to five cents per unit, which is sending M-Q developer sales skyward. With the new packet much higher moisture protection is assured, caking of chemicals due to air and moisture seepage is precluded and consumer convenience is increased since it is a simple matter to tear off either envelope and shake out the chemicals. In addition, the filling and sealing operations are much faster, weight of the unit package is decreased and the cost of packaging material is reduced. Such benefits easily justify the painstaking effort required for such package planning.

3—One-trip dispenser carton holding 100 M-Q Developer packages supplied to dealers, takes little space.

3



# Packaging



**1** Prestorer, a paint brush rejuvenator, recently acquired a newly designed label for its wartime glass container. Now that the product is returning to tin, the designer has adapted the green, black and white label to fit the new medium while maintaining all the advantages of the design. The direction-for-use panel appears on the back of the can. Labels, Every Ready Label Corp., N. Y., and Sun Press, Inc., New York City. Glass Jar, Hazel-Atlas Glass Co., Wheeling, W. Va. Metal container, Continental Can Co., New York City.

**2** The familiar Gerber's baby appears again on the shelves, this time on an entirely new product—apricot-farina. At the present time this product is appearing all over the country in cans except for the Eastern market, where the container is glass. The same label design has been adapted to both types of packages—a smaller one for the jar to allow full visibility of the product. Lithography, The United States Printing and Lithograph Co. and Michigan Lithographing Co. Cans, Continental Can Co., New York. Jars, Owens-Illinois Glass Co., Toledo, O., Hazel-Atlas Glass Co., Wheeling, W. Va., Anchor Hocking Glass Corp., Lancaster, O.

**3** A lustrous black molded phenolic vial has been chosen by J. L. Priess for his new powdered perfume, "Dri-Perfume." The new container passes the specifications which call for a material which is odorless, does not affect the essential oils contained in the perfume and has a permanently pleasing appearance. The perfume is copied from an ancient Mohammedan

formula designed to circumvent the taboo which that religion places on the use of alcohol in any form. An attractive folding carton is used to protect the container from mars and scratches in handling. Material, Durez Plastics & Chemicals, Inc., North Tonawanda, N. Y. Molder, Northwestern Plastics Co., Chicago.

**4** Antique crackled gold finish makes distinctive containers of these bottles and boxes for "A Man's Choice"—a new men's toiletries line. The finish, a combination of hand brushing and spraying, is put on by means of a process known as Florentine antiquing and the hunting-scene labels actually look like an integral part of the entire finish. California redwood is used in making the boxes and same finish is used. This finish may be adapted for many packages for candy, jams, jellies, tobacco or other products; particularly for gift items where the re-use value of the container has sales value. Artistica of New York, essentially a packaging organization, is the distributor of the toiletries as well as the manufacturer of the finish for the glass and wooden containers.

**5** Lord Middlebrooke is the name chosen for the new line of men's toiletries launched recently by Middlebrooke Lancaster, Inc. Six products are packaged in sets of three each in simulated wood-grained boxes. The deckled labels are British tan with black and white trim—very masculine looking. Black plastic caps decorate the square bottles used for the liquid products and white metal screw caps trim the jars. Bottles

# Pageant



and caps, Owens-Illinois Glass Co., Toledo, Ohio. Cartons, Model Box Co., Brooklyn, N. Y. Labels, Rainbow Press, Brooklyn, N. Y.



**6** The Industrial Gloves Co. of Danville, Ill., uses a simple but effective card to display its finger-guard to best advantage. The index finger on the card is die-cut so that the guard slips over it and can be removed for easy inspection. The card is a one-color job, light rust-red, and all printed matter on the face is in reverse print. The back of the card, printed in rust on white, shows various uses for the product. The cards are outer-packed in paperboard cartons for shipment. Card, Interstate Printing Co., Danville, Ill.

**7** DDT is stepping out in new dress. The Pennsylvania Salt Mfg. Co. of Philadelphia is marketing two of its insecticides under the trade name "Knox-Out." The quart jar on the right for the 5% liquid solution will be changed to a quart tin by the time this reaches press. Its companion piece, the company's new dust or powder, is packed in a cylindrical paperboard gun-type sprayer which holds eight ounces of a 10% solution. In two parts, the container pumps the powder through a perforated top. Bottles, Gayner Glass Works, Salem, N. J., Cylindrical Container, R. C. Can Co., St. Louis, Mo.

**8** A new transparent pressure-sensitive tape called Cello-Tape, a product of Freyberg Bros.-Strauss, is being merchandised





# Packaging



in its own dispenser. The cellulose acetate dispenser is molded in two parts—one forming the base with the serrated cutting edge and the other the round top which has a plug to slip into a hole in the base and thereby hold the roll of tape in place. The trade name appears in gold on either blue or red. Separate rolls of tape are sold for refills. Material, Lumarith, Celanese Plastics Corp., New York. Molder, Sterling Plastics Co., Union, N. J.

**9** The newly adapted container for Sterling sugar-curing meat salt, recently adopted by the International Salt Co., is a fibre can with metal ends and has a readily removable metal lid. Special attention has been given the design for this container. Red and white on a background of brilliant blue lends sales appeal to the product. Complete directions for use appear on a white panel on the back of the container. The design of the container is repeated as nearly as possible on the outer corrugated shipping container for immediate identification in shipping room and retail storeroom. The number of containers and size are printed in large bold type. Fibre can, American Can Co., New York City. The National Color Printing Co., Inc., Baltimore, Md. Design, James Harley Nash, New York City. Corrugated container, Kieckhefer Container Co., Camden, N. J.

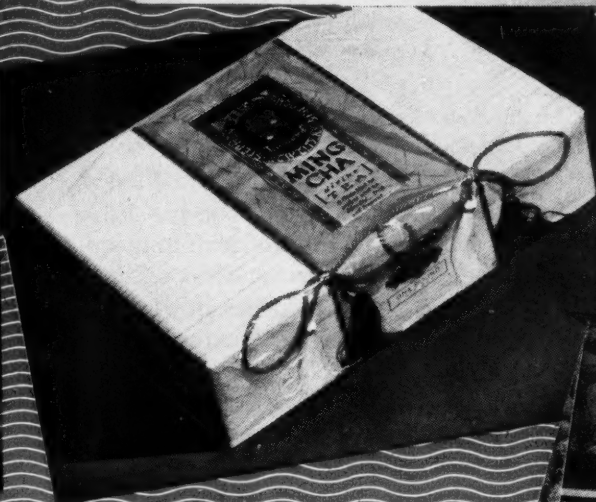
**10** A new shaving stick designed to please the shaver whose accoutrements have been olive-drab or black for the past

few years is this one of bright red and black injection molded cellulose acetate for Williams Shaving Sticks. The white screw-type base in which the stick is fixed, is provided with a rough gripping edge to make the unit easy to open, by a mere twist, even with wet hands. Material, Tenite by Tennessee Eastman Corp., Kingsport, Tenn. Molder, Worcester Moulded Plastics Co., Worcester, Mass.

**11** The Webster Tobacco Co., Inc., is promoting its pound and half-pound packages of tobacco in these attractive wooden boxes which can easily be converted into gift packages simply by slipping a holiday card under the outer cellophane wrap. A heat-sealing, three-ply sheet in the form of a bag protects the tobacco itself. It is made of glassine, aluminum foil and cellophane laminated together with a moistureproof material. The innermost surface of the bag is the cellophane which is heat-sealing. A pressure-sensitive label, in color and printed with the tradename, joins the top and the bottom of the box and the whole package is overwrapped with heat-sealed cellophane for extra protection. Inner bag, Marathon Corp., Menasha, Wis.

**12** With the thought in mind that her perfume is too delicate for constant exposure to light and air, Esme of Paris has designed this new luxury box for "Green Eyes." Black and silver marble whirls, over a green background, make the box handsome enough to grace any dressing table as a permanent

# Pageant



14

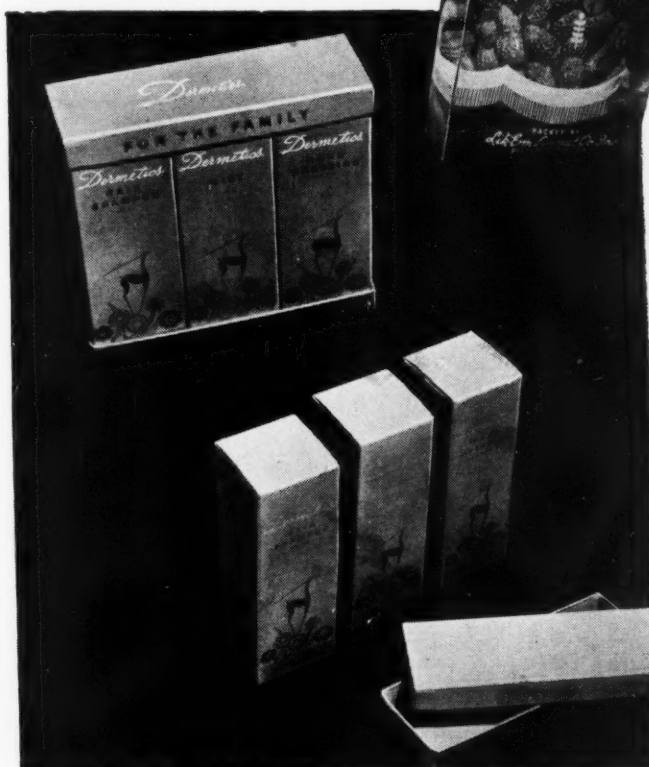
protection for the perfume within. The bottle itself, a square chunky mold, sets into the recessed, cloth-covered base.

**13** Some of the first tea to arrive here from China since the war is packaged in a redwood box by Stephen Leeman Products, with the label carrying the "Air Shipped" story. Ming Cha Divine Tea is the name of this special shipment which is inner-wrapped in foil. The entire package is outer-wrapped with cellophane after the label and decorative cord bows are attached. Foil, Reynolds Metals Co., Richmond, Va. Labels, Arkadia Label Co., New York. Redwood box, S. Elkeles Cigar Box Co., New York.

**14** Opaque glassine overprinted with a reproduction of an actual photograph of peanuts produced this effective package for the Lik-Em Peanut Co. of Pittsburgh. Product identification and brand name both stand out sharply in dark blue against the peanut tan of the photograph, making an eye-appealing bag. Package designed and produced by Milprint, Inc., Milwaukee, Wis.

**15** Three new products have recently been added to the Dermetics line—shampoo, hand dressing and mouth freshener—in a package meant for the bathroom shelf and to be used by the entire family. The three bottles in folding cartons can be made into a set by the addition of two trays, top and bottom, which makes them one unit.

15



# Glued unit loads cut breakage of bottled goods

by Charles W. Braden\*

Claim prevention is not a new subject. It has been discussed by shippers and carriers in the past, and educational campaigns have been conducted with a view to the prevention of loss and damage to goods in transit. While very desirable results have been accomplished, yet it is reported by the Freight Claim Division of the Assn. of American Railroads that freight loss and damage claim payments by the railroads of the United States during the first six months of this year aggregated \$34,729,074 reflecting an increase of \$8,801,579 or 33.9% over the corresponding period of last year.

About 60% of the aggregate freight loss and damage claim payments was on damage to freight in packages. While the amount represents an all-time high in monetary value, it must be recognized that under conditions which exist, the economic loss was considerably greater due to the difficulty of replacement. Wartime conditions had their influence, particularly as to shipping containers and loading and handling in transit.

Certain industry groups have given more than the usual consideration to the problem of damage in transit of merchandise in packages. Shippers of bottled alcoholic liquors and wines packaged in fibreboard shipping cases have been among those to whom the problem became a serious one, and they have endeavored effectively to meet it through experimentations and conferences with the carriers.

The National Distillers Products Corp. watched with interest the development of the glued pallet load

\* General Traffic Manager, National Distillers Products Corp., New York.

*The practice of unitizing shipping loads by applying strips of adhesive between cases is an outgrowth of palletizing experience during the war. Where pallets are used, it minimizes the need for steel strapping. A recent development dispenses with pallets and simply forms a glued unit in the boxcar. Results in reduction of shipping damage are so remarkable that most distillers and bottlers are adopting the practice for all carload shipments.*

as utilized by the Quartermaster Corps and the Navy's Bureau of Supplies and Accounts. In line with their policy of supporting a new arrangement tending to promote the mutual interest of shipper and carrier, they decided to investigate the principle of unitizing of fibreboard shipping cases in the car through the means of adhesive.

Three series of experiments were decided upon, comprising a total of 12 cars originating from the company's plants at Cincinnati, O., and Louisville, Ky. Representatives of the initial-haul railroads and others were present. The cars were followed up at their respective destinations, and the loadings and unloadings were witnessed by them, as well as by representatives of the delivering lines.

The three series of experiments were conducted with the fullest cooperation of the adhesive manufacturers,

PHOTOS 1 AND 2 COURTESY NATIONAL DISTILLERS



1—Cases enter freight car over portable glue applicator, in foreground, and are stacked as shown. Two cases on stack are up-ended to show two narrow strips of adhesive.

2—Close-up of model installation for applying two strips of special adhesive to bottoms of cases. 3—Top view of a glued unit carload arranged according to bonded block pattern recommended by Assn. of American Railroads. Note the slack space allowed in center of car.

2



3



PHOTOS 3 AND 4 COURTESY NATIONAL ADHESIVES

the railroads and other interested parties. The results of the experiments exceeded expectations, as the breakage was nil. Having proved the soundness of the basic principle of unitizing of the load through the application of adhesive, the information on the success of the trial runs was made available to all other shippers in the alcoholic liquors and wines industry. Many shippers of other industries were supplied with information upon request and a number of them undertook the use of the arrangement.

While the experiments proved the soundness of the basic principle involved, certain details had to be perfected. Pending their solution, the experiments were suspended and an engineering firm was called into conference to construct a model installation. The model installation was delivered to the Cincinnati plant of National Distillers for use as a guide in resuming the experiments and placing the arrangement in effect.

The widespread interest created through distribution of reports on the experiments prompted Edward Dahill, Chief Engineer, Freight Loading and Container

Section, Assn. of American Railroads, who became personally interested in the merits of the arrangement, to suggest to National Distillers that a Carloading Demonstration and Claim Prevention Conference be held at their Cincinnati plant and that others be invited to inspect the model installation and demonstration on the loading of a car. This event was held at the Cincinnati plant on Nov. 16, and some 48 representatives participated, including the members of the Committee on Direction of the A.A.R. Freight Loading and Container Section, who came from all parts of the United States and Canada, representatives from other companies in the alcoholic beverage industry, as well as representatives of other industries.

A total of 1,636 cases, consisting of 1,300 cases of fifths and 336 cases of pints, with an aggregate weight of 60,000 lbs., was loaded in the demonstration car and consigned to the Pennsylvania Liquor Control Board at the Terminal Warehouse, Philadelphia, Pa. Upon the unloading of the car in Philadelphia, a number of those who attended the Cincinnati conference were present. The car arrived without any shift of the load in transit and without a single bottle being broken. Each case was readily lifted from its neighbor at time of unloading.

National Distillers have taken steps to adopt glued unit loading at all of their plants and on all cars for the future, as soon as certain local details can be taken care of and the glue applicator installations procured in sufficient quantity to take care of their normal requirements. Schenley Distillers, California Vineyards Assn., Petri Wine Co., Wine Growers Guild, E. & J. Callo, Italian Swiss Colony and others in the industry have been testing the arrangement and are reported as taking steps to adopt it. Others outside the distilled spirits and wine industry—particularly the H. J. Heinz Co., the Duffy-Mott Co., and others—have conducted tests and adopted the arrangement on a number of cars.

The method of unitizing does not involve any major



4

4—Partially disassembled load showing slight damage to case tops when cases above are stripped off. The special adhesive used has low tensile but high shear strength.

departure from the conventional handling of the cases from off the production line or shipping warehouse floor into the freight car. Various stowage patterns may be used. For the purpose of the experiment and the exchange of ideas, several different stowage patterns were followed in loading the demonstration car, including end-to-end, interlocking and capping. The arrangement, in turn, does not involve any change in the usual unloading of cases from the car at the receiving warehouse.

The model installation used at the Carloading Demonstration and Claim Prevention Conference in Cincinnati on Nov. 16, as illustrated in Fig. 2, incorporated several improvements over the "home-made" installation used in previous experiments. The unit developed for the automatic application of the adhesive consists of a section of skate conveyor, approximately 4 ft. long, mounted on adjustable legs. The unit is designed to couple on at the discharge end of the conveyor loading into the car and to be moved as the loading of the cases progresses.

The glue reservoir or pot, built in at the intake end of the unit, is of sufficient depth to permit the installation of a pair of applicator wheels  $4\frac{1}{2}$  in. in diameter. The applicator wheels,  $\frac{5}{8}$  in. in thickness, are permanently mounted on a shaft, so hung that the wheels' rotation describes an arc about  $\frac{1}{4}$  in. higher than the neighboring skate wheels of the unit, thus assuring

positive contact with the bottom of each shipping case as it passes over the glue pan. Scrapers are affixed to each applicator wheel to control the flow of the glue.

The model is of sufficient length to allow the complete clearance of each case after passage over the pair of applicator wheels, before lifting from the installation for stowage on its neighboring case in the car. There are two glue applicator wheels and thus two parallel strips of glue are applied to the bottom of the case as it passes over them. The applicator wheels pick up the glue from the reservoir as they rotate as a result of the passage of the case over them by manual power.

As care must be exercised in moving the cases over the installation in order to obtain the proper placement of the two parallel strips of glue to the bottom, guide rails are provided. This was a feature of the model installation which had not been incorporated in the previous experiments.

The special adhesive developed for this purpose was found to produce a bond of high shear strength which, when properly applied, permitted the ready separation of the cases with little, if any, damage. The adhesive proved to be highly water-resistant and yet could readily be removed from the applicator and other equipment. The cost of the adhesive is very nominal and a gallon will unitize about 1,200 cases.

As different sized cases—pints, fifth and quarts—are generally involved in the loading of the average car, the applicator wheels must be adjusted accordingly. On the model installation, a separate fixed pair of wheels was supplied for each size of case; however, some users have tried affixing the wheels freely to the shaft in such a manner as to permit their adjustment to the different sized cases.

The ideal to be sought is the application of a minimum film of adhesive in continuous parallel strips running the length of each shipping case, the outer edge of each strip being about 1 in. from the side scoring of the case. If the floor of the car is in good condition, the bottom tier of cases is placed directly on the floor; if the floor of the car is rough, used containers are spread thereon to prevent scuffing and damage to the fibre-board of the shipping case.

As to stowage of the cases in the car, it was found that better results are obtained if the bonded-block pattern of loading (Fig. 3), as described in Bulletin No. 13 of the A.A.R. Freight Loading and Container Section, is followed. Care must be exercised to be sure the cases are stowed tight against the side walls of the car. Due to the variation in car widths, it is frequently necessary to compensate for excessive space. This can readily be done by distributing the spacing between all cases across a given row with assurance that the adhesive will maintain the spacing; dunnage is not required. While partial tiering is generally discouraged, National Distillers have successfully completed shipments containing partial tiers held in place by glue alone. In fact, bracing of partial tiers is not recommended.

The success of the glued (*Continued on page 170*)

# Desiccant for drugs

... it guards the potency of oral penicillin

**P**enicillin throughout its meteoric career has been a packaging problem. Essentially a common mold, it is phenomenally unstable. It must be completely dehydrated when placed in the package and the package must be 100% moistureproof and water-vaporproof. If the penicillin picks up only a few points of moisture, it may lose potency and be unsuitable for use.

Up to now, penicillin has been available generally only in the form of a dry powder, successfully packaged in carefully sealed glass containers,\* ready to be reconstituted into a liquid for hypodermic injection.

Recent development of penicillin in tablet form, for oral administration, posed some new packaging considerations. The tablets, although sold only on a physician's prescription, would not necessarily be taken under the physician's supervision. A course of treatment of possibly a dozen tablets would involve opening and reclosing the container. The tablets had to be ready for use in a foolproof container.

The tablet package evolved by Wyeth, Inc., of Philadelphia, involves one of the first instances of the use of a desiccant to maintain necessary low humidity in a drug package. This principle, suggested by war packaging of metal parts seems especially adaptable to drugs.

The package itself is an ordinary glass tube. In the bottom of the tube there is placed a small amount of desiccant calcium sulfate combined with cobalt salt. A layer of cotton is placed above this, then the 12 tablets—each containing 25,000 units of penicillin—and finally another layer of dry cotton sufficient to fill the tube. A cork stopper is firmly applied, and the entire closure end is heavily wax-dipped.

The calcium sulfate acts to absorb any moisture that may be in the package and the cobalt salt which is combined with it serves as a tell-tale indicator to give warning if the atmosphere within the tube, by any chance, rises to an unsafe level. The cobalt salt is blue when dry and turns pink upon pickup of moisture.

Thus Wyeth can be sure that its product reaches the consumer in perfect condition. Vials are inspected for color of the desiccant before a shipment leaves the plant. Druggists are instructed to examine each vial before delivering it to a customer and to return to the factory any vials in which the desiccant has turned pink. Finally, the user is warned by the following statement on the label: "The drying agent (blue granules) is provided to protect the potency of the tablets. Change of color to pink indicates absorption of moisture and probable loss of potency of the tablets."

However, the wax-sealed closure is so effective that, according to Wyeth officials, only a negligible per-

centage of packages have been returned because of moisture absorption. Indications are the penicillin will remain stable for at least six months.

Although it is purely incidental in this case, the filled glass tube presents a colorful and attractive appearance. Care is taken that the paraffin wax (melting point 118 to 120 deg. F.) in which the end is dipped has been dyed the standard Wyeth shade of blue. This is balanced by the delicate blue color of the crystals at the other end. The penicillin tablets are soft lemon yellow. The label, blue on white.

The folding carton which contains the glass vial is sealed with a white strip label, printed in blue, which extends over top and bottom flaps to seal them. All packaging operations are done by hand.

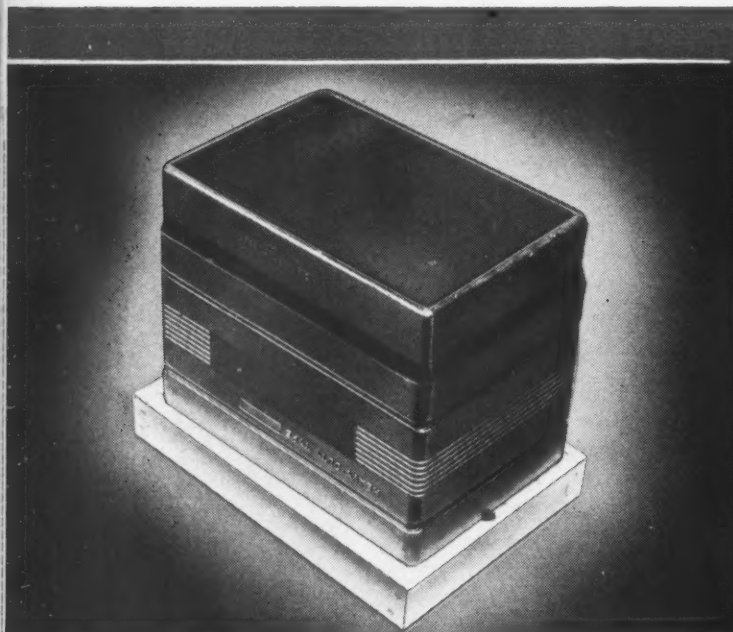
**CREDITS:** Desiccant, "Blue Dry-Rite," by W. A. Hammond Co., Xenia, O.; cork closure by American Star Cork Co., Inc., Brooklyn; vials by Kimble Glass Co., Vineland, N. J.; paraffin wax by Stevenson Bros., Philadelphia; cartons by Boyce Folding Box Co., Philadelphia; labels by Franklin Hodges Printing Co., Phila.

*Blue crystals at bottom of vial are calcium sulfate, a desiccant treated to turn pink if excessive moisture is present. Dry cotton is inserted above and below penicillin tablets; cork-stoppered end is wax-dipped.*

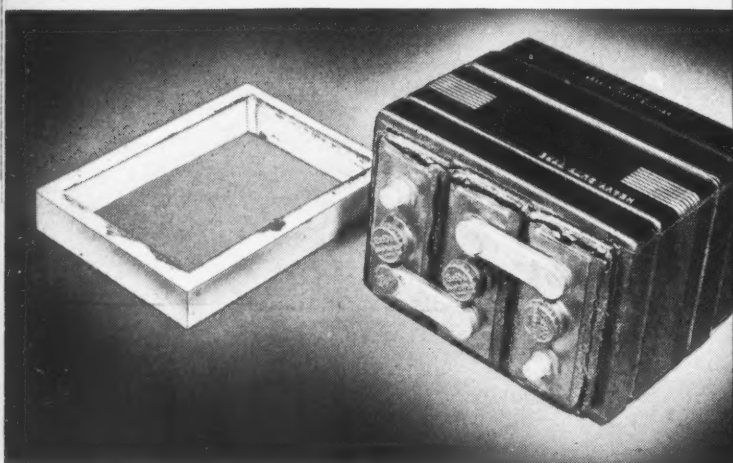


\* See "Penicillin," MODERN PACKAGING, Feb. 1944, pp. 53-60, and "Innovations in Penicillin," MODERN PACKAGING, June 1944, pp. 79-82.

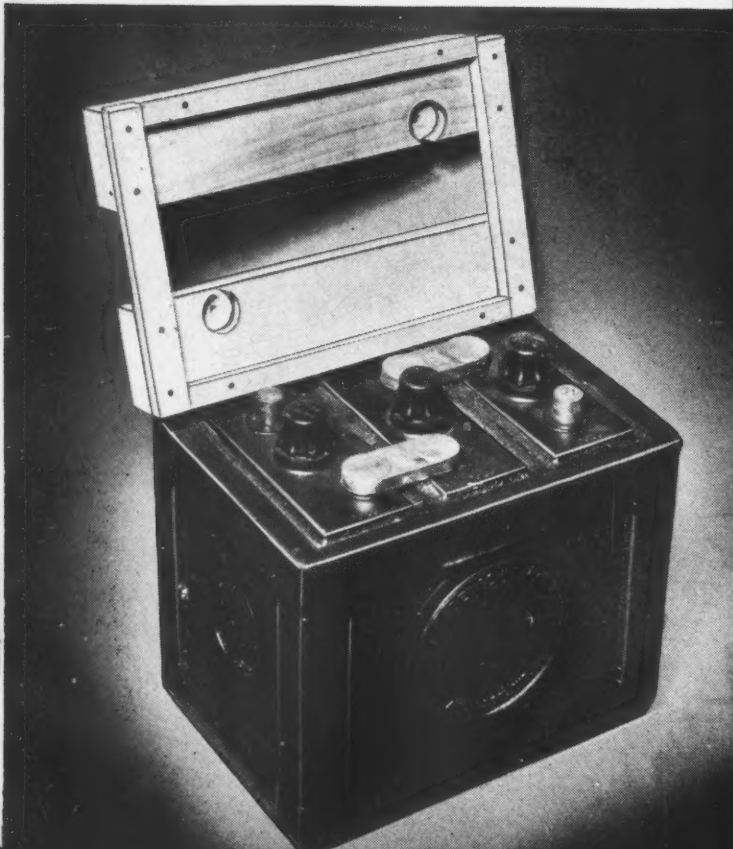
# Packages engineered by Forest Products Lab.



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When the U. S. Forest Products Laboratory, Madison, Wis., opened its doors recently to press representatives for the first time since Pearl Harbor, visitors inspected a wide variety of specially developed containers, designed to carry safely to the fighting fronts everything from tiny replacement parts to huge bomber wings. In addition, press representatives viewed recently evolved packaging materials and methods and learned how the laboratory cooperated with the armed forces, Government agencies and private industry in meeting the many difficult packaging problems created by the war.

The activities of the special School of Packaging conducted by the laboratory, through which technicians were given the fundamentals of package engineering to prepare them for war packaging duties, were described in the February, 1945, issue of MODERN PACKAGING. Early in 1942, the Forest Products Laboratory organized a series of courses in packaging, aircraft wood inspection, repair of wood aircraft and other subjects. Through mid-August, 1945, a total of 15,639 men and women had been given training in 293 separate classes conducted in all parts of the country. By far the largest number of these, 14,294, were trained in packaging work in 242 classes extending from a few days to two weeks in length.

Among the interesting packages demonstrated at the recent press conference were those developed to protect spare batteries in shipment. Wartime experience soon proved that both battery and package designs as commonly used in peacetime were inadequate to meet the increased hazards. In the intense heat encountered in the holds of ships, the pitch used to weld the cells in aircraft storage batteries tended to soften, allowing the cells to slide out when stowed in an inverted position and resulted in a high percentage of loss. In addition, overweight boxes which could not be carried by hand were dumped off in unloading, causing further breakage. In one of the early Allied invasions, a large percentage of the batteries that were shipped separately from the vehicles arrived in a damaged condition, temporarily immobilizing the vehicles themselves.

1—In testing strength of the sealing compound around the cell tops of storage batteries, a battery was inverted with only top edges of the case resting on the wood panel so that the weight of the plate assemblies and cell tops was supported by the sealing compound only. 2—After 48 hours, the cell assemblies are shown pulling out of position. This indicated a need for bearing support at the tops of cells and terminals in the shipping case. 3—Resulting engineered top frame for battery is designed to bear firmly on the tops of both terminal posts, on inter-cell connectors and on the battery case itself.

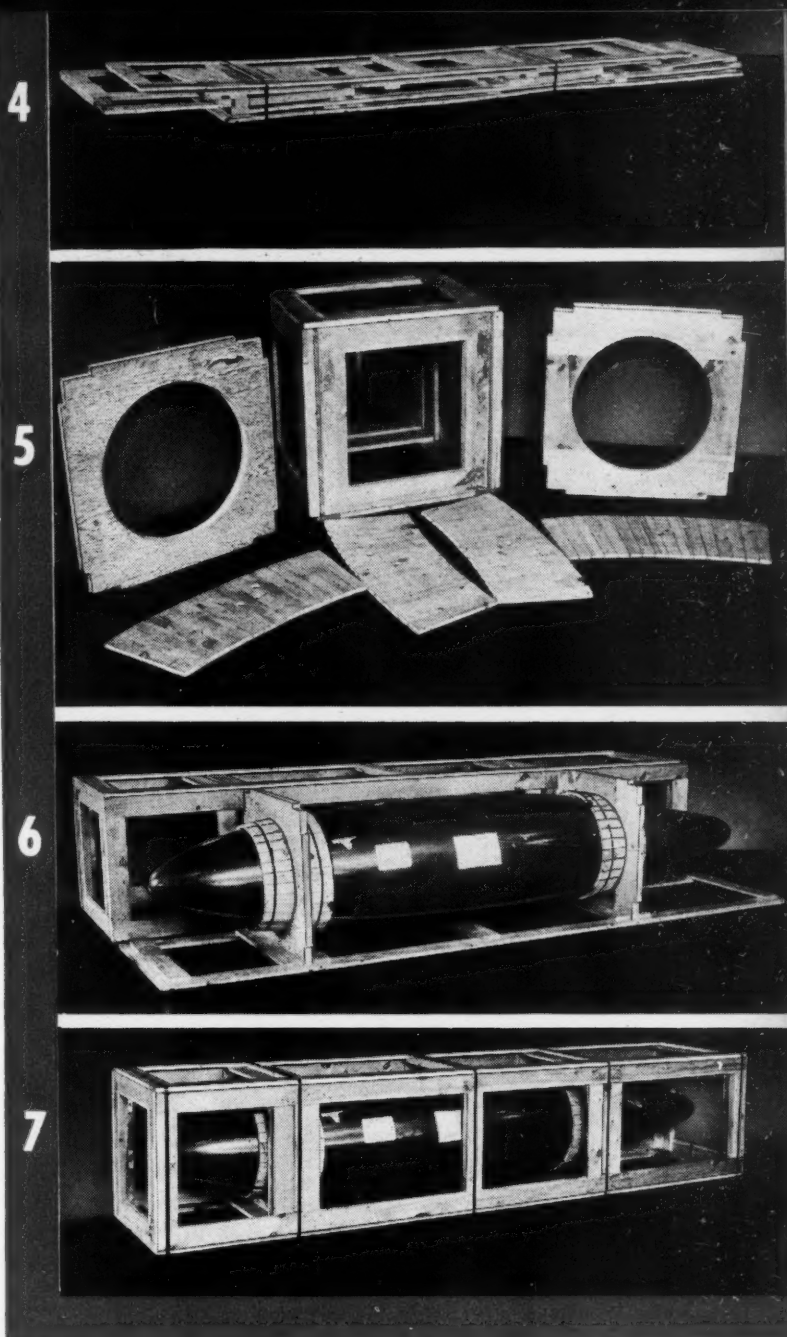
4—Re-usable, collapsible, unsheathed crate which was developed for Navy droppable fuel tank is shown collapsed with the cradles, liners, top, bottom and sides strapped together. 5—Details of plywood and nailed wood cradles, the liners and end of crate, showing the metal hinges and interior cleats into which the cradles are fitted. 6—Here the fuel tank and blocking are assembled in position on the bottom of the crate; method of strapping the liners in place is shown. 7—Completed pack, showing fuel tank and cradles in place, strapped and ready for shipment.

Forest Products Laboratory invited battery manufacturers to witness demonstration tests of their own battery packs. They were shown new proposed packs and tests were made to bring out the weaknesses of certain parts of the batteries themselves which required redesigning. In the pack for vehicle batteries, a wood frame, supported on the terminals and posts, held the cells in position. Subsequently, the frame was extended to the edge of the case to provide greater bearing area. To keep the frame in place and to provide a moistureproof pack, the battery was placed in a V-board carton sealed with pressure-sensitive tape and strapped once each way, and the carton was cushioned in excelsior within a nailed wood shipping container.

For shielded batteries such as are used in aircraft, wood blocking was designed to fit inside the case while clearing and protecting delicate parts. For the latter type, a special method of packaging, making use of folded corrugated pads, was necessary because of the irregular exterior surfaces. Reports from the using forces indicate that these designs reduced battery damage to negligible proportions.

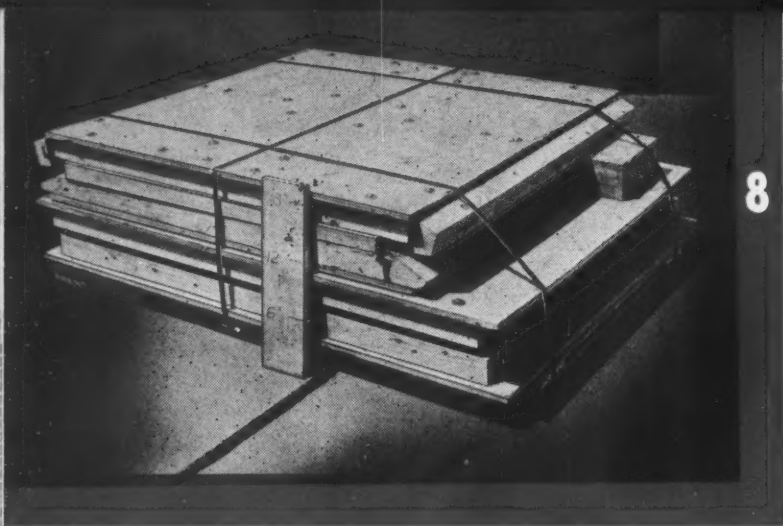
The redesign of containers in the interest of reduced shipping space requirements and of economy of packaging materials was a primary concern of the laboratory throughout the war period. An example of a simple change in shipping space as effected through research is afforded by the tripod mount for the M5 anti-aircraft fire detector. This mount was formerly shipped assembled in a box requiring 89 board feet of lumber and occupying 48 cubic feet of space. A field packaging consultation, after conferences with design engineers and officials, succeeded in having the tripod altered slightly so that it could be shipped collapsed, making it possible to package the mount in a wirebound veneer box requiring only 39.5 board feet of lumber and 10.3 cubic feet of space. The savings were 55% in lumber and 78.5% in cubic displacement.

A request for a container for droppable fuel-tanks, thin-shelled and easily damaged in shipment, was complicated by the requirement that it be re-usable and collapsible. In the pack designed by the laboratory, a pair of semi-circular flexible curved liners, consisting of wood strips nailed or stapled to plywood pieces, is strapped to the tank at approximately one-fourth the distance from each end, and a plywood cradle, slipped over each end of the tank, is positioned on the bottom of the unsheathed crate. The sides are sprung over the



cradles and the latter adjusted in place between the cleats on the sides, after which the top is laid on and the crate strapped. This crate and method of blocking afforded protection to the tank in rough-handling tests simulating shipment within forward areas. The container is designed to facilitate stacking or palletizing, loaded or empty, and requires minimum shipping and storage space when collapsed.

In conjunction with other organizations, the laboratory has been investigating the properties, advantages and limitations of a spray-type strippable coating developed for the protection of Ordnance matériel for stand-by and long-term outdoor storage. The coating demonstrated during the press tour consists of a flexible synthetic (vinyl) lacquer which is highly resistant to water vapor and does not adhere to metal. For the first coat, the basic lacquer is modified by addition of a webbing agent which causes the material to issue from the spray gun as long cobweb-like filaments which



8—An aircraft engine pack of Forest Products Lab. design is a collapsible re-usable crate; the photograph shows the complete pack with the panels collapsed and strapped.

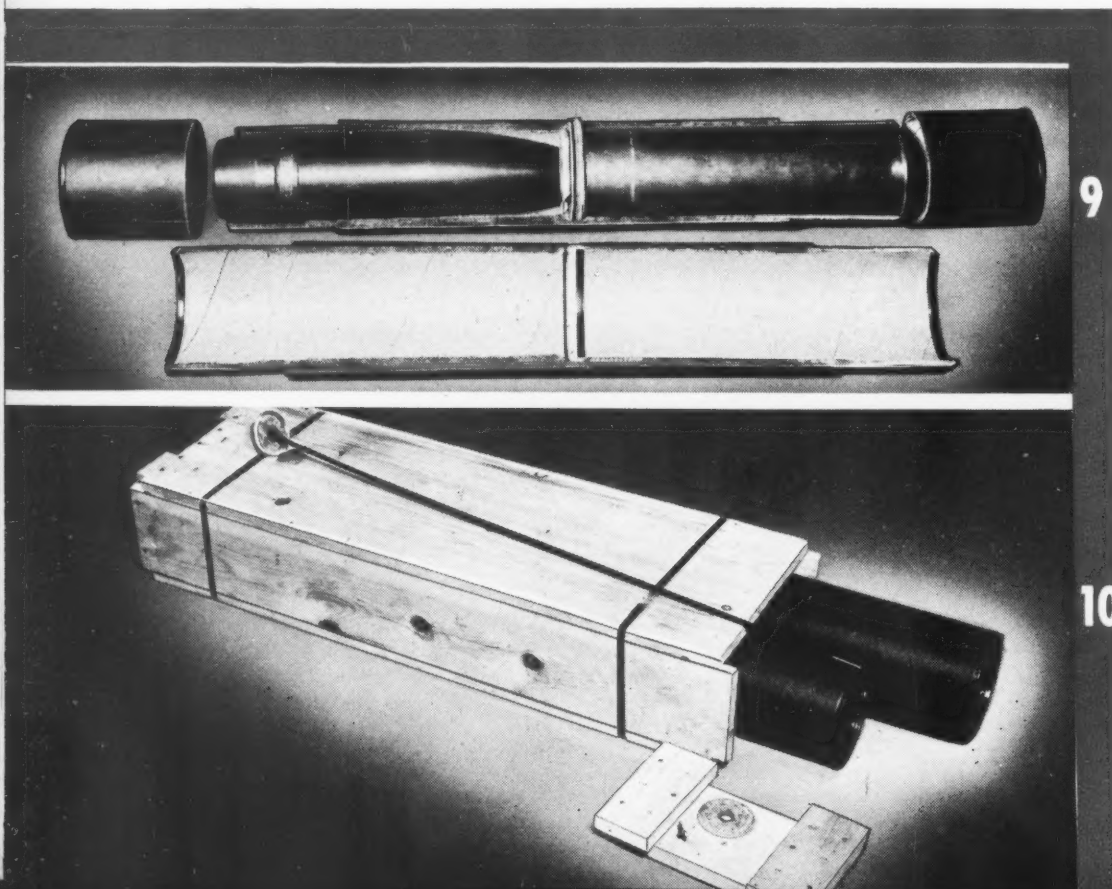
will bridge an opening which is 2 ft. or more in width.

In the demonstration, an electric fan was quickly packaged by this method. Before being sprayed, several strips of pressure-sensitive tape were run between projecting points of the fan to form the framework of a relatively "streamlined" shape. The entire unit was then sprayed until completely shrouded with fine strands and subsequent coats of unmodified lacquer were similarly applied until a final film about 0.040 in. thick had been built up. The film was then slit at two points and solvent vapors expelled by blowing warm air through the package, after which silica gel was placed within the package, accompanied by a humidity indicator, and the unit sealed with a plastic window positioned to permit visual inspection of the indicator.

One of the most significant observations made by a "survey team" inspecting packages in the European Theater of operations prior to V-E Day was the rela-

tively poor performance of the blocking and bracing within crates containing aircraft control surfaces. The Army Air Forces requested the Forest Products Laboratory to design packs for a number of control surfaces frequently shipped overseas for replacement purposes. Because of the relatively fragile type of construction of control surfaces, carefully designed blocking is required to hold the part securely in the container, leaving critical areas free of stresses. Packs designed for export shipment of the P-51 aileron, elevator, rudder and vertical stabilizer for use as spare parts successfully passed tests designed to simulate rough handling in shipments and were accepted for use by the AAF. Packages for the P-47 vertical stabilizer, the P-47 horizontal stabilizer and the P-51 horizontal stabilizer were also developed.

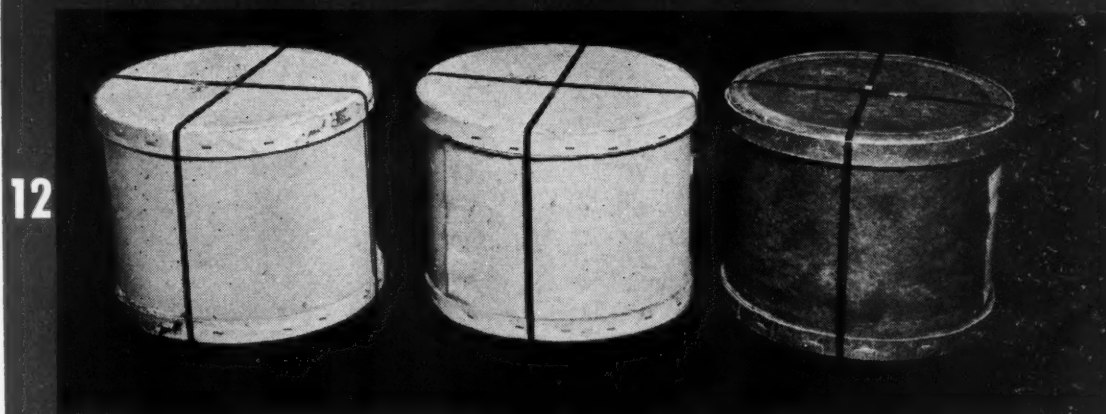
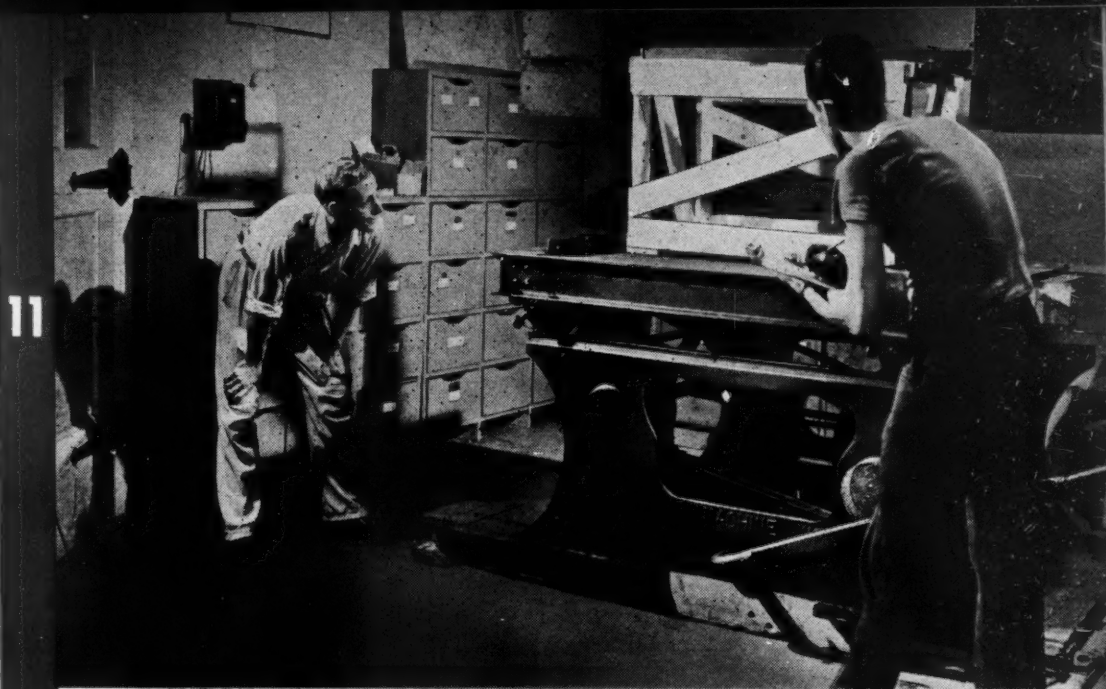
Re-usable containers devised by the laboratory at the request of Ordnance and the Army Air Forces were an important factor in conserving valuable automotive and aircraft assemblies requiring shipment and re-shipment. Before the adoption of re-usable containers, such assemblies were shipped to forward areas in completely nailed containers which were usually destroyed on removing the parts, leaving no container for shipping the worn or broken components to the rear for repair. Means of blocking and securing irregular and multi-shaped sub-assemblies in the crates, together with efficient and interchangeable means of assembly fastening of the crates, were evolved. More than 100 re-usable container specifications were developed for items such as aircraft engines and transmission, differential and final-drive assemblies for military vehicles. Some of the containers, such as those used for aircraft engines, are collapsible. Similar containers should prove useful for the peacetime shipment of sub-assemblies of heavy or stationary machinery requiring frequent overhauling.



9—In foreground is longitudinal section of fibreboard container for 105-mm. semi-fixed ammunition; in rear, projectile and cartridge case in position. Collars and metal supporting fork prevent projectile from coming in contact with cartridge case.

10—Long two-round rectangular shipping box for 105-mm. semi-fixed ammunition packed in fibreboard tubes. Cartridge case end and projectile end are alternated to balance load. Closure is effected by steel rod running through box, fastened with wing nut.

11—Crate undergoing test on vibration machine at rate of 550 vibrations per min. 12—Three cheese drums with Type A bands, loaded and strapped preparatory to drop-edgewise tests. Left, wet-strengthened asphalt-sized chipboard drum with kraft band; center, non-wet-strengthened asphalt-sized chipboard drum with chipboard band; right, wax-dipped drum used commercially for export. The wet-strengthened drum proved superior in tests; the wax-dipped drum was poorest.



Wartime demand for delivery of millions of rounds of 105-mm. ammunition resulted in an immediate need for containers with superior properties. Because of the critical shortage of metals, a fibreboard case was developed and produced in large quantities. Early containers did not afford adequate protection and ammunition was often dented or otherwise damaged. Forest Products Laboratory cooperated with the Army Ordnance Department in an investigation of the materials and methods used in production of shell cases and in the evaluation of improvements as they were developed commercially. As a result of this experimental work, a four-fold improvement in strength, along with considerable improvement in water resistance and resistance to damage caused by rough handling, was obtained.

Rough-handling tests of paperboard containers made in mill trials showed that containers of the type used for canned goods which were made from wet-strengthened board containing no new pulp, were as good when dry and better when wet than ordinary non-wet-strengthened containers in which 65% new kraft pulp was used. Wet-strengthened board was also used in

millscale manufacture of cylindrical fibre cheese boxes, which proved markedly superior to the commercial product. A large manufacturer of fibreboard cheese drums has recently started using this special board in the production of such drums.

Among the devices demonstrated during the laboratory tour was a vibration tester designed to simulate the bumping and jarring to which a container is subjected in a moving freight car or vehicle. It has been found that this action often not only loosens the joints and fastenings of a box but may be transmitted to the interior to such an extent as to cause wear of wrappings by abrasion, failure of the interior blocking and bracing, and serious damage to contents. The vibrating machine used to simulate this action includes a table, 5½ ft. by 4 ft., operating at 550 vibrations per minute, with a vertical and horizontal travel of ¼ in. Boxes up to 1,400 lbs. in weight can be tested on this device, which is an adaptation of a gravel screen and was developed at one of the Ordnance arsenals, where it was first used to study the adequacy of internal packing and blocking in ammunition containers. It was utilized extensively in a recent study of shell-egg packages.



# Display

**1** With the expansion of the children's record line for the recent holiday season, RCA-Victor announced new picture story albums and newly packaged favorites. In order to show off the various children's albums and records, this uniquely designed 6-ft. floor merchandiser was adopted for self-selection. On wheels, it can be moved to the portion of the department which gets the most traffic. The display, built in the shape of a colorful playhouse, is called "Children's Music House" and can be utilized throughout the year to display other juvenile recordings. Display, W. L. Stensgaard and Associates, Chicago, Ill.

**2** Raleigh cigarettes are being promoted both in windows and on counters of the nation's retail tobacco shops by means of colorful cards and posters similar to the one shown here. Full-color lithography adds appeal to the beauty of the model here illustrated. An absolute minimum of copy puts across the story of the quality of the cigarettes—in fact, the only mention of cigarettes in the display appears in the reproduction of the familiar Raleigh package. Display, Kindred, MacLean & Co., Inc., Long Island City, N. Y.



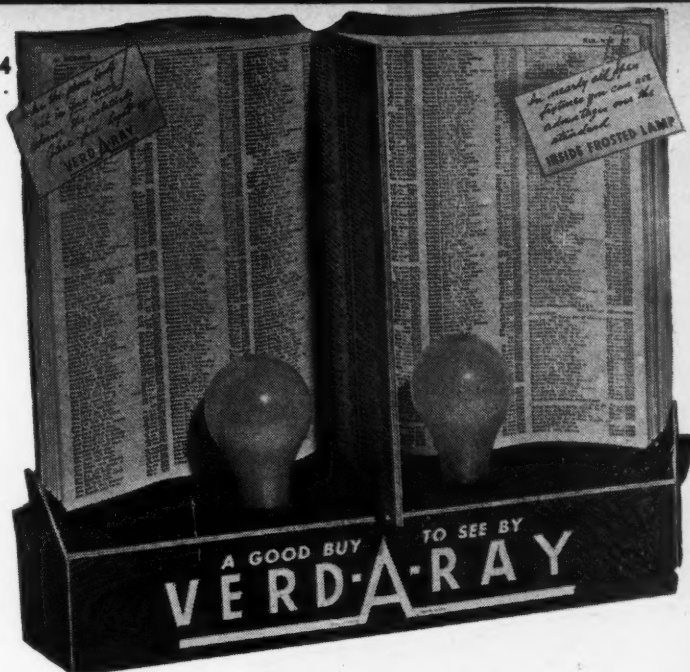
**3** Three new Pond's displays, of simple construction with the emphasis on color and eye-appeal, are offered to retailers as self-selling counter units. The one at the left is fashioned in steps, each holding three boxes of the new combination "make-up trio." The display is colored under each box to match the shade of the powder in the box. The make-up pat display is die-cut to hold six samples, again stressing each of the shades available. The cover of the case is attractively set into the backpiece. For "Lips," Ponds drops the die-cut platform which holds the six lipsticks down below the level of the display and highlights the actual color in each by spotting it in a circle on a light background. Displays, Oberly & Newell Lithograph Corp., New York.

**4** An unusual lithographed display piece dramatizes the advantages of the glare-free light from Verd-A-Ray bulbs over



# Gallery

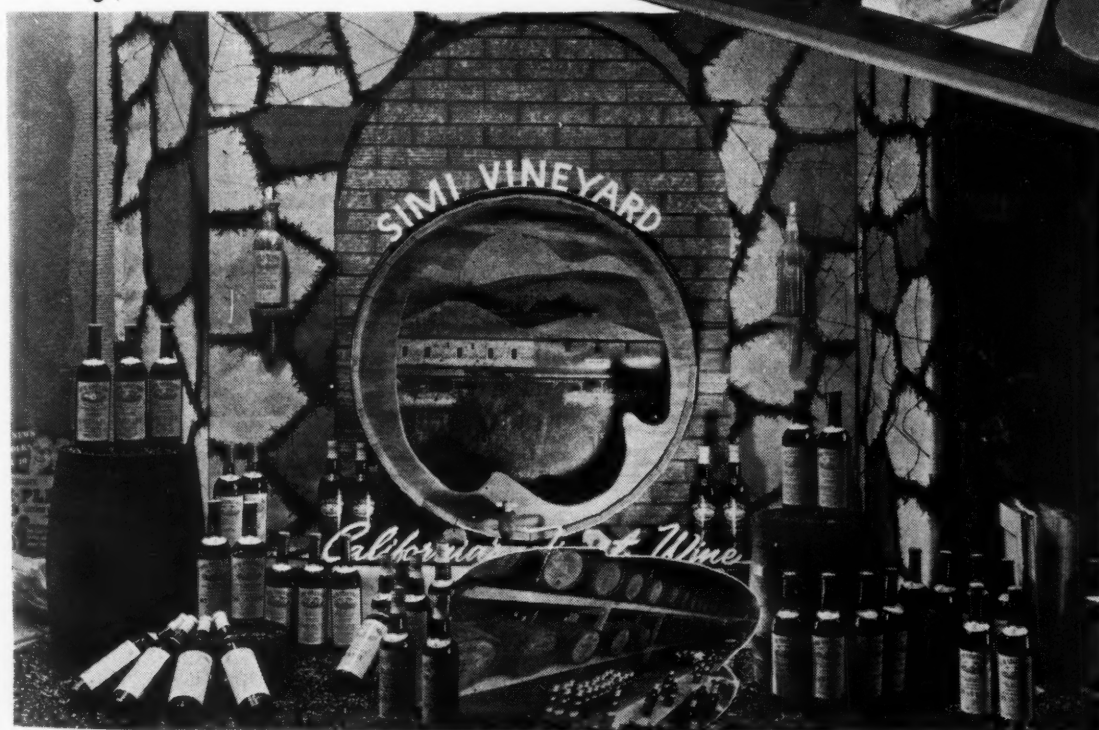
that of the standard inside frosted lamp. Mounted on cardboard and ingeniously scored and die-cut, the display illustrates how a test can be made at home of the two types of bulbs with an ordinary phone book. The base is of paperboard covered with a simulated wood-grain design and is wired for the sockets to hold the bulbs. Display created and produced by Forbes Lithograph Mfg. Co., Boston, Mass.



5 Extreme simplicity with emphasis on brilliant color provides an unusual window display for Chen Yu Cloudsilk make-up. The greatly enlarged photograph used for the centerpiece has the exotic appeal of the Far East accentuated by the costume worn by the model. The sidepieces promote the company's other two products—lipstick and nail enamel. Each piece is a full-color reproduction of a mass of life-sized reproductions of the actual product. The photograph is fastened to a base which forms a small shelf to hold several of the opened containers, adding depth to the display. Display, Einson-Freeman Co., Inc., Long Island City, N. Y.



6 A new treatment in wine window displays which uses large photographic blowups of actual winery interior scenes, vineyards and winery exteriors has been introduced by Parrott and Co., United States distributors of Simi Vineyard wines, with this installation in the McLean, Goldberg Bowen food store of San Francisco. A large photograph in color of one of the sherry-aging cellars showing the small oaken aging casks is in the foreground. Framed within the central cut-out, is a large colored photograph of the winery and a portion of its Sonoma Valley hill-side vineyards, the arrangement and lighting giving a stereoscopic effect. The wings and backdrop simulate the stone walls of the winery.





ARMY SIGNAL CORPS PHOTO

1—Nothing could tell more eloquently the job which packaging has done in providing "fresh" frozen milk for the Armed Services than the expressions on the faces of these GI's, homeward-bound on a Liberty ship from Naples.

## Frozen milk . . . it keeps for months in paper cartons

Preserving milk by freezing after it has been poured into containers is not, strictly speaking, a new development. More than ten years ago, Dr. B. H. Webb of the U. S. Dept. of Agriculture was granted a public service patent on a process for freezing condensed milk.

However, wartime experimentation and research sponsored by the Armed Forces added much to knowledge of the method, were responsible for an important modification in the shift from condensed to whole milk and focused attention of dairy concerns on the process by affording a sizable market for those willing to install the necessary equipment. Use of frozen milk by the War Shipping Administration alone now amounts to 1,250,000 half-pints per week. Since initial experimentation has been completed, equipment installed and favorable consumer response noted, it is probable that large dairy companies will seek to establish a commercial market for the product.

To understand the packaging requirements it is necessary to consider briefly the freezing process. Most significant technical result of Army-sponsored research was probably the shift from frozen condensed to frozen whole milk because of the vastly superior keeping qualities of the latter. The palatability of whole milk so preserved depends upon the rapidity of freezing. If frozen slowly, there is a tendency for the fat to be thrown out of emulsion and precipitated, so that the milk is broken down into its constituent parts and is unsatisfactory when thawed out.

Commercial companies who do the actual processing for the Services first homogenize the milk to prevent cream separation, pour it into containers and then freeze it rapidly. This is best accomplished in a wind tunnel where temperatures reach 20 degs. below 0 deg. F., although it is sometimes done in ordinary freezing rooms similar to those in which ice cream is prepared. Quick freezing at such a low temperature causes milk to

form in minute crystals easily restored to original condition by slow thawing over a 24-hr. period in an ordinary refrigerator with a temperature of approximately 36 degs. F. Prior to the thawing out period, it must be stored at a temperature of about 15 degs. F.—well below freezing.

Selection of a suitable container for frozen milk—either condensed or whole—involves decisions as to optimum size and most suitable material for a container, from the standpoints of freezing, storing and service.

At present, the vast majority of frozen milk is processed, transported and served in half-pint, pint or quart rectangular liquid-tight waxed paper cartons of the type in which fluid milk is sometimes retailed. There are many advantages in using the same small container for all phases of the processing and supply program. First, it cuts down the number of operations, saving time, labor and expense. Secondly, the compactness of the containers, which are usually packed 12 to a case, makes it convenient to load and store them, as well as easy to draw out any small quantity desired for thawing at a particular time. Thirdly, by eliminating any necessity for opening the package from the time it is filled in a sanitary dairy until it is served, the purity of the milk is preserved.

Army medical officers frowned upon bulk freezing because of the danger of contamination when the milk was thawed out and poured into smaller containers, particularly since most of it was destined for patients aboard hospital ships. From this standpoint, the ideal size for a container for Army or Navy use would be the half pint. In practice, however, it is often necessary to procure it in pint or quart sizes. These sizes will also be used for retail sales if such a market is found for frozen milk.

But, having decided to use a retail size container, there remained the question of packaging material.

Preferably an already existent container would be adopted, since quantity production would be more readily obtainable. Only metal cans, glass bottles and waxed paper containers have been widely used as retail milk packages.

Condensed milk frozen by Dr. Webb's process was originally packaged in cans, but this could be a risky practice because most people believe any canned food will keep indefinitely at room temperature and might easily confuse frozen condensed with ordinary evaporated or sweetened condensed milk. Dr. Webb's process involves removing water from pasteurized milk, but preservation is entirely by freezing, in contrast to evaporated milk, which is sterilized, or sweetened condensed, in which sugar acts as a preservative.

There are many reasons for packaging frozen milk in waxed-paper containers rather than the glass bottle most commonly used for retail sales of fluid milk in this country. For military and naval use, particularly, ordinary glass containers are seldom satisfactory. The distances traveled and rough handling endured increase danger of breakage. The ordinary rounded milk bottle wastes valuable space in packing, while the rectangular paper carton wastes none. For military use, the expense of glass bottles would have been much greater since return of empties for reuse would have been impractical. In commercial marketing, transportation costs would be greater for milk in glass bottles than for milk in waxed-paper cartons because of the difference in weight of the containers.

However, the most important single reason for the practically universal adoption of the waxed-paper container for frozen milk is its ideal qualifications for use in the actual freezing operations. The expansion of freezing milk normally occurs in all directions. Upward expansion in glass bottles would tend to force off the caps unless they were securely fastened and sideways expansion would break the glass. Waxed paper "bottles" on the other hand, being less rigid, will "give" a little to accommodate expansion.

The large volume of waxed-paper containers needed to meet the requirements of the Armed Services for frozen milk presented a supply problem during the war. Because of the shortage, procurement officers were obliged to secure the containers from various sources and to disregard label information on the containers.

In early trials, the waxed-paper containers were not placed in their fibreboard shipping cases until after the milk had been frozen. Often sidewise expansion caused their walls to bulge to such an extent that it was impossible to force the requisite number of containers into a case. Present procedure calls for packing the filled rectangular cartons into the fibreboard box before freezing, in order to keep horizontal expansion at a minimum in the interest of tight packing. Tests were made to determine whether a special type of shipping case would be of advantage in facilitating freezing. It was found, however, that open panels on the top or sides of the case did not reduce the freezing time enough to warrant the use of any special containers.

Since expansion is chiefly in a vertical direction, it is necessary to leave a sufficient expansion space allowance when filling flat-topped containers. Another style of package used has a peaked-roof closing, and this extra space affords the necessary room for expansion.

Preservation of milk for as long as three months by freezing it in a retail package has been proved practical and additional experimentation being conducted currently may even triple this period. In one instance milk frozen for 16 months was found to be satisfactory.

There is still much to be learned about the preservation of whole milk by freezing. To add to the knowledge gained as a result of military research during the war, the National Dairy Council has stated that it will undertake a project for the study of the problem.

First official Army interest was shown in July 1944, when Transportation Corps officers, who were fighting a continual battle to make the best use of limited cold storage space aboard ships, expressed interest in the space-saving possibilities of Dr. Webb's frozen condensed milk. However, experimentation by the Veterinary Division of the Office of the Surgeon General soon determined that frozen condensed milk, originally palatable, could not be successfully reconstituted after three or four weeks due to coalescing of milk solids.

Frozen whole milk, on the other hand, could be kept for months, but because of its approximately 87% water content it would require far more cold storage space than was available. The majority of overseas troops would just have to put up with powdered milk, which was an adequate nutritional substitute but could not compare in flavor.

However, for one group of soldiers, it was decided that the morale value of whole milk outweighed consideration of space limitations. The European war was taking its toll and hospital ships full of wounded were returning to the United States. The first food request of many of the men was for a "tall glass of cold milk." "It is impossible for a civilian to realize how good a glass of milk tastes to these men," says Brigadier General R. A. Kelser, Director of the Veterinary Division.

For many of the wounded a good diet was essential to a rapid recovery and it was realized that merely supplying the requisite number of calories and vitamins did no good unless the food was appetizing enough to coax the patient to eat it. And even apart from any

*There are two ways of extending the marketing of milk into areas that can't be reached in sufficient quantity by the fresh product—dehydrating it or freezing it. Both of these methods, developed on a large scale only during the war, depend to a large extent on proper packaging. The packaging of dried milk was described in in last month's MODERN PACKAGING. This article completes the picture reporting on wartime packaging of frozen milk.*

consideration of nutrition, there was an inestimable morale value in filling the food requests of the wounded. To these men, such delicacies as fresh fruit, ice cream and whole milk in familiar waxed-paper cartons were associated with home and a peacetime life.

When shipping conditions permit, small quantities of frozen milk go to Army hospitals overseas and for other special purposes.

Navy policy is much the same. Recently the Navy has been gradually adopting frozen-in-the-carton milk similar to that supplied to the Army. But it has only been since V-J Day that procurement of frozen milk under Army specifications has become an official Navy policy aboard hospital ships and returning troop ships.

When, at the end of the European war, cargo vessels were converted to troop carriers, the Food Control Division of the War Shipping Administration planned a feeding program to be carried out on each ship by the steamship company operating the vessel. Menus were to include popular foods rarely seen overseas—fresh eggs, oranges, ice cream, and twice a day a half-pint carton of thawed-out frozen milk. WSA specifications called for freezing homogenized milk with added Vitamin D, preferably in half-pint cartons, since each container would constitute an individual's portion.

Passengers on the first converted Liberty ships to return were asked for written comments and criticisms of the meals. Response was enthusiastic and indicates that the taste of frozen milk leaves nothing to be desired.

Exact figures on the quantities procured for all wartime uses are not available, but one Army official estimated that approximately 25,000 qts. were supplied to Army hospital ships during the month of June alone, in addition to 200,000 qts. for use of troops stationed in Alaska. War Shipping Administration plans call for a pint of milk a day per man aboard converted cargo vessels. If the space problem had not been such an acute one, the market would have been much larger.

After the immediate postwar period, when all wounded and returning troops are back, this particular specialized market may be expected to shrink and con-

tinuing production of frozen-in-the-carton milk will depend upon finding new markets in a world at peace. With the added expense of freezing and extra cold storage, frozen whole milk cannot compete in price with fluid milk, so it is reasonable to assume that shipments will not go to areas within easy range of fluid milk.

On the other hand, the superior keeping qualities of frozen whole milk may open entirely new market regions. It has been predicted that all Merchant Marine and passenger ships will use frozen milk, since there will be adequate refrigeration on ships for the storage of cartons of milk when the Navy returns to a peacetime basis and ships' complements have been reduced.

As for land markets, frozen whole milk can be shipped to areas beyond the transportation range of fluid milk. Other settlements, near enough to receive unspoiled fluid milk but so small or isolated that shipments are infrequent, would be better served by frozen whole milk.

A potential market, for instance, might well exist on one small Caribbean island with a total population of approximately 10,000, about 2,500 of whom are Americans—employees of an American oil company and their families. Most of the food supply and all of the water for these people are imported from the States. No milk is produced locally. Such an island, already equipped with cold storage facilities, might prove an ideal market for frozen milk. The product would arrive in good condition, while the lack of a competing local product would warrant the price.

Yet to be determined is the economic factor. Do such isolated populations exist in a quantity and concentration that would warrant transportation? Are they willing and able to pay prices that will cover freezing, packing and shipping costs as well as actual price of the milk? In other words, specialized markets undoubtedly exist, but whether or not they are profitable markets will be the determining factor in continuing production of milk "frozen in the carton."

CREDITS: Flat-top carton by American Can Co., New York; peaked-top carton by Purepac Corp., New York.



2—The work-a-day paper milk "bottle" proved to be the best package for frozen milk, and because of the need for speed and volume, it was adopted without even a change of label. Later it may be specially labeled. In filling, space is left at the top for freezing expansion.

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# Freezer packages . . . a survey of commercial types

Unless the demands of their customers or the introduction of new types of containers radically change the picture, Western frozen food firms in the seasons ahead expect to put up their packs largely in the following types of packages:

Fruits, institutional . . . . . tin cans  
Fruits, consumer . . . . . fibre packages  
Vegetables, institutional . . . . . fibre packages  
Vegetables, consumer . . . . . fibre packages

This is revealed by a survey conducted recently by *Western Canner and Packer*. Forty leading Western frozen packers—19 in California, 18 in Washington-Oregon and 3 in Utah—provided confidential reports on the types of packages they expect to use as soon as wartime curtailments are eliminated.

Consumer packages, in this study, have been consid-

ered to be containers holding 1 lb. or less. In this size, 83% of the packers said they plan to pack frozen fruits in fibre—cartons or bags, with or without bag liners or various types of overwraps—while 7% anticipate using both fibre and tin and 10% look to the can to meet their packaging needs.

In the vegetable field, 96% expect to put their consumer packs in fibre, and 4% may use both fibre and cans. No packer indicated that he would turn to tin exclusively.

As to containers ranging from over 1 lb. up to 50 lbs.—which would include the so-called institutional packages normally running from over 1 lb. to and including 10 lbs., and also the smaller manufacturing sizes from over 10 lbs. up to 50 lbs.—the evidence indicates that the fibre package will hold a place of leadership in the vegetable line, but (*Continued on page 172*)

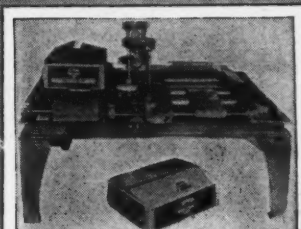
U. S. FROZEN FRUIT AND VEGETABLE PACKS BY CONTAINERS\*  
In thousands of pounds (000 omitted)

Item	Retail sizes (1 lb. & less)		Institutional (1 to 10 lbs.)		Manufacturing (Over 10 lbs.)		Totals	
	M lbs.	%	M lbs.	%	M lbs.	%	M lbs.	%
<b>Fruits</b>								
Barrels								
1941	...	..	...	..	93,511	45	93,511	45
1942	...	..	...	..	71,365	37	71,365	37
1943	...	..	...	..	82,172	44	82,172	44
1944	...	..	...	..	103,318	32	103,318	32
Tin cans								
1941	...	..	...	..	63,341	30	63,341	30
1942	...	..	...	..	87,302	45	87,302	45
1943	...	..	...	..	14,093	8	14,093	8
1944	...	..	...	..	27,896	9	27,896	9
Fibre								
1941	29,092	14	12,468	6	9,391	5	50,951	25
1942	17,333	8	10,320	5	8,325	5	35,978	18
1943	13,514	6	1,891	1	75,597	41	91,002	48
1944	23,049	7	6,875	2	161,500	50	191,424	59
Totals								
1941	29,092	14	12,468	6	166,243	80	207,803	100
1942	17,333	8	10,320	5	166,992	87	194,645	100
1943	13,514	6	1,891	1	171,862	93	187,267	100
1944	23,049	7	6,875	2	292,714	91	322,638	100
<b>Vegetables</b>								
Barrels†								
1941	...	..	...	..	124	..	124	...
Tin cans†								
1941	...	..	...	..	245	..	245	...
Fibre†								
1941	45,000	43	38,000	36	23,821	21	106,821	100
1942	57,656	38	66,585	44	28,271	18	152,512	100
1943	66,011	31	90,751	44	51,110	25	207,872	100
1944	103,677	44	85,790	37	44,869	19	234,336	100

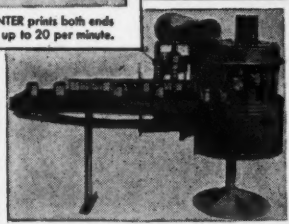
\* As compiled by *Western Canner & Packer* from reports of individual packers and from data of the National Assn. of Frozen Food Packers.

† No barrel or can packs reported after 1941 for vegetables. Fibre packs, therefore, are total packs for the industry except for 1941, when the total of the three container types was 107,190,000 lbs.

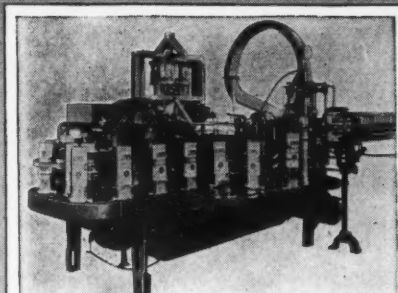
# TO HELP YOU SPEED YOUR PRODUCTS ON THEIR WAY....



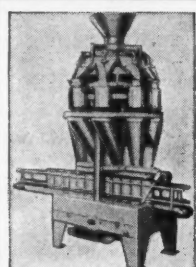
PACKOMATIC CASE IMPRINTER prints both ends of the case simultaneously, up to 20 per minute.



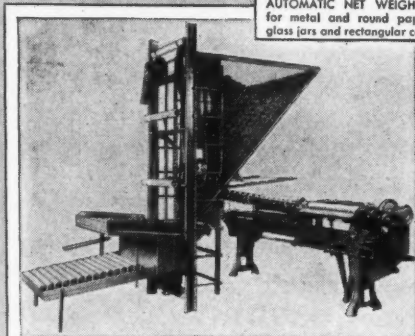
AUTOMATIC TELESCOPING VOLUMETRIC FILLER for handling semi- and free-flowing products.



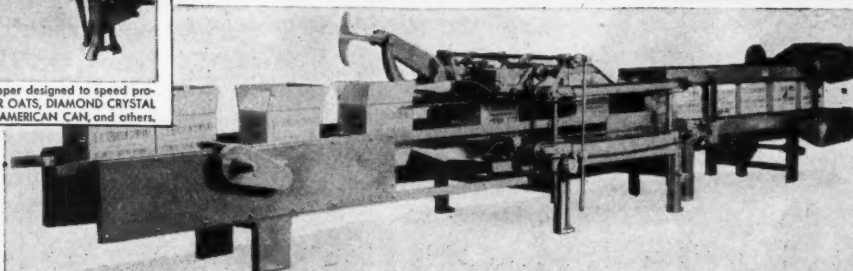
PACKOMATIC COMBINED TOP AND BOTTOM CARTON SEALER with automatic carton feeder and volumetric filler seals both top and bottom flaps automatically. Operating speed, 60 cartons per minute.



AUTOMATIC NET WEIGHT SCALE for metal and round paper cans, glass jars and rectangular containers.



AUTOMATIC TUBE CUTTER with elevator hopper designed to speed production from 70 to 100%. Used by QUAKER OATS, DIAMOND CRYSTAL & LESLIE SALT COMPANIES, SWIFT & CO., AMERICAN CAN, and others.



NEW, STREAMLINED, MODERNIZED MODEL D PACKOMATIC CARTON SEALER seals both carton tops and bottoms on one machine—or tops or bottoms only if desired. Portable or stationary models are available to handle regular corrugated or fibre shipping containers at various speeds.

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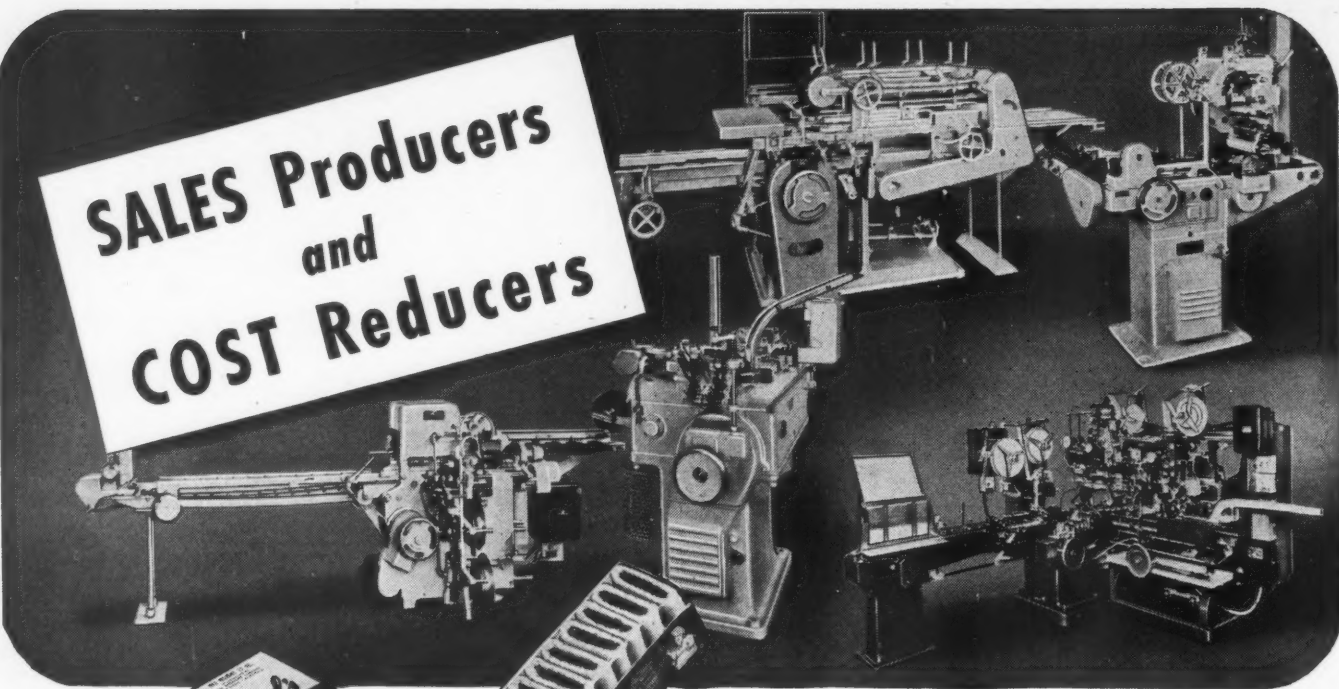
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*Charles A. Southwick Jr.* • Technical Editor

## Packaging metal parts

### 1. Corrosion prevention starts on the production line

*by Dr. Charles E. Waring\**

The packaging of metal parts to supply the needs of a global war has brought forth many new materials and techniques, and has required the improvement of many others which were already in existence. The standards required were very high because of the extreme conditions of exposure and handling encountered in military service. While these standards will undoubtedly be greatly lowered in postwar commercial conditions, many of the materials and techniques developed under war conditions will find economical applications in modified form. It is the purpose of this series of articles to describe some of the materials and methods which seem most promising for peacetime adaptation.

Early in the war it was found that many metal parts and assemblies were arriving at depots in damaged condition, even though they had been processed with rigid adherence to existing packaging specifications. This was found to be true not only with parts shipped overseas but with parts in storage at warehouses in this country.

Investigations soon demonstrated that much of this trouble originated in faulty cleaning processes in the plant of the original manufacturer. Further investigation revealed the fact that many parts were being rejected for rust and corrosion which occurred during manufacture and before final inspection. These difficulties resulted in economic waste under any circumstances, but when utmost production was needed in time of war, they could not be tolerated.

Research work carried out under the sponsorship of the Army has evolved methods for eliminating such troubles which have proved very successful in practice. It has led to an entirely different conception of metal parts packaging: namely, that it begins on the assembly line, when the part is first fabricated.

We may logically divide the subject of packaging, based on this conception, into two main headings:

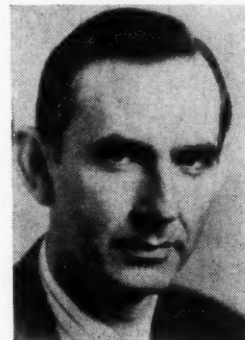
#### 1. Cleaning and corrosion protection of metal parts

\* Technical assistant to president, Davison Chemical Corp., Baltimore, Md.

- during processing and before the final inspection.
2. Corrosion protection, wrapping and sealing to make the unit package.

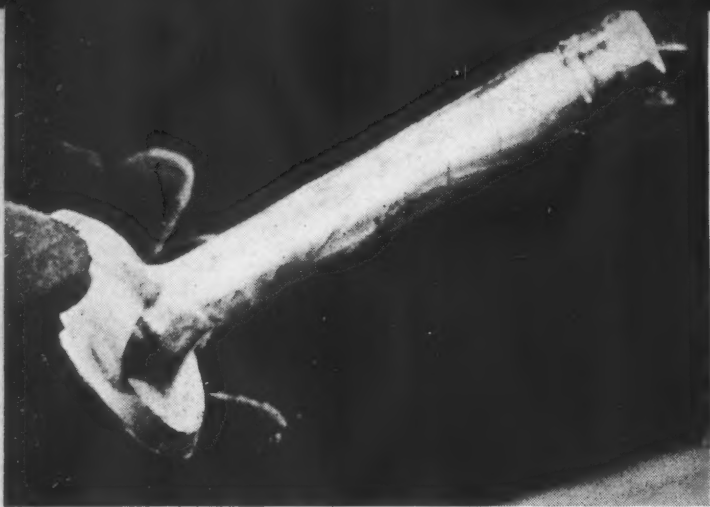
This article will be devoted to Point One. Point Two will be covered in other articles in this series.

It is believed that the materials and methods which have proved successful in cleaning and corrosion protection during processing will be especially well adapted to postwar modification, as they have actually saved

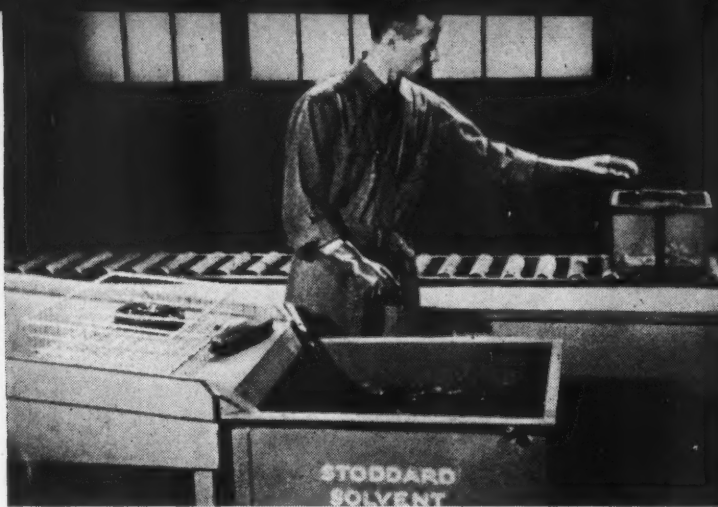


*Dr. C. E. Waring*

*The editors of MODERN PACKAGING consider themselves fortunate in being able to present this, the first of a series of articles by one of the nation's outstanding authorities on corrosion-proof packaging. In his previous connection with the Frigidaire Division of General Motors Corp., Dr. Waring was instrumental in developing and maintaining for the Armed Forces specifications covering Methods I, I-A and II packaging, as well as the strip-coating technique. In these articles he will point out features of the wartime methods which should be retained in peacetime packaging of metal parts.*



1



2

1—Rust spots on this valve stem were caused by finger-prints in handling. Use of gloves or washing part in methanol will prevent this type of corrosion. 2—This is the simple production line equipment used for the cleaning of metal parts with Stoddard solvent before the application of a temporary corrosion-preventive film.

money in almost every industry where they have been used.

The type of protection required for parts during processing varies according to the types of exposure which may be encountered, and with the materials from which they are made. Certain types of exposure appear to be common to all industrial operations. The succeeding comments apply primarily to ferrous parts of a precision nature. Good corrosion-preventive practices should protect against exposures to high relative humidity, corrosive industrial atmospheres, condensation cycles and contamination from handling. Contrary to the usual belief, it is probable that exposure to high relative humidity is the least hazardous of any of the above conditions. Careful laboratory work has indicated that high relative humidity *alone* is not a very corrosive factor.

Carefully cleaned test panels have been exposed to conditions of 85% relative humidity at 90 deg. F. for periods as long as four months without developing more than a slight tarnish film. Much lower relative humidities are required for the protection of parts that have been handled or contaminated. Also, tests have been run in controlled atmospheres comparing exposure at 90% relative humidity at 100 deg. F. with exposure at 100% relative humidity at 100 deg. F. It was found that the latter condition, which produces continuous condensation, caused corrosion to take place by a factor of 15 to 20 times as fast as the 90% relative humidity condition, which produced no condensation on the panel.

With respect to corrosive industrial atmospheres, it is impossible to evaluate them in the laboratory. Many locations unavoidably have relatively large concentrations of sulphur dioxide in the air due to the use of coal containing high percentages of sulphur. Locations in close proximity to pickling or plating installations are also likely to have extremely corrosive atmospheres. Resistance to such exposure can only be determined by

actual experimentation in the particular location involved.

As a result of the above requirements, certain standardized test procedures have been developed which are widely used for evaluation of corrosion-preventive materials. First of all is the actual exposure of test panels or actual parts to factory conditions in selected locations. In order to obtain a true picture, even this actual exposure will have to be duplicated at different times of the year. For example, in the winter time, sulphur dioxide due to coal smoke may be a very pronounced factor, while in the summer time high relative humidities in combination with acid fumes from processing equipment may be the most acute factor.

A number of accelerated methods have been developed to evaluate other corrosive factors. These methods may be listed as the humidity cabinet, the salt spray cabinet and the synthetic fingerprint contamination procedure.

The humidity cabinet is a piece of equipment designed to produce 100% relative humidity at a selected temperature, usually either 100 deg. F. or 120 deg. F. Until recently, the characteristics of such equipment were subject to wide variation, since no standardized design had been accepted industrially. Recently, great strides have been made in the standardization of this equipment by various Army laboratories, and it appears that a recent design of the Materials Laboratory of the Air Technical Service Command has a considerable chance of being accepted for standardization. The protection ability of a rust-preventive material in the humidity cabinet may be accepted as an index of its ability to protect both against high relative humidity exposure and condensation cycles.

The second procedure is the salt spray cabinet, which has already reached a high degree of standardization. This technique has very little application with regard to corrosion-preventive methods used in factory processing, unless there is some unusual industrial condition

which produces actual exposure to salt spray. In general, the salt spray cabinet should never be used to evaluate materials against corrosion produced by humidity or corrosive industrial atmospheres.

The third method is the use of a synthetic fingerprint solution to produce a standardization fingerprint which duplicates very closely actual fingerprints as encountered in factory production. This technique may be used for the evaluation of the ability of materials both to remove fingerprint contamination and to suppress corrosion caused by fingerprint contamination.

In the past, various materials have been used in factory processing to prevent corrosion during handling. These may be classified as follows:

(a) *Uninhibited coatings with a hydrocarbon base*—These consisted primarily of petrolatum or mineral oil, or various combinations of the two. The protection afforded depends primarily on their ability to exclude moisture from the metal surface.

(b) *Animal fats*—The best example of this classification is lanolin, which is still used in many corrosion-preventive compounds. It has been used both alone and in various dilutions with such solvents as kerosene and Stoddard solvent.

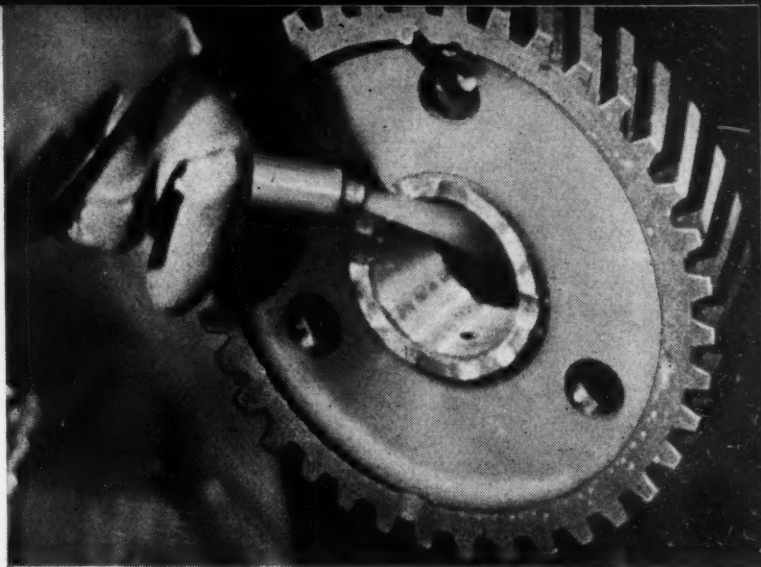
(c) *Soluble oils*—It was found that many cutting oils of the soluble oil type had good corrosion-preventive properties, provided that all the water was removed from the surface by drying with blasts of compressed air.

Materials or methods currently used for the prevention of corrosion during processing may be classified as follows:

1. *Water emulsion types*—These materials are primarily variations of the soluble oils described above and, in fact, the usual type of soluble oil may be included in this classification. Many of these materials have been developed with excellent rust-preventive properties. Most of them have one limitation in common: They should not be used on parts or assemblies where cracks, crevices, or blind holes may trap appreciable quantities of the emulsion, for such emulsions have a tendency to separate into an oil and a water phase and, under such conditions, accelerate corrosion rather than prevent it.

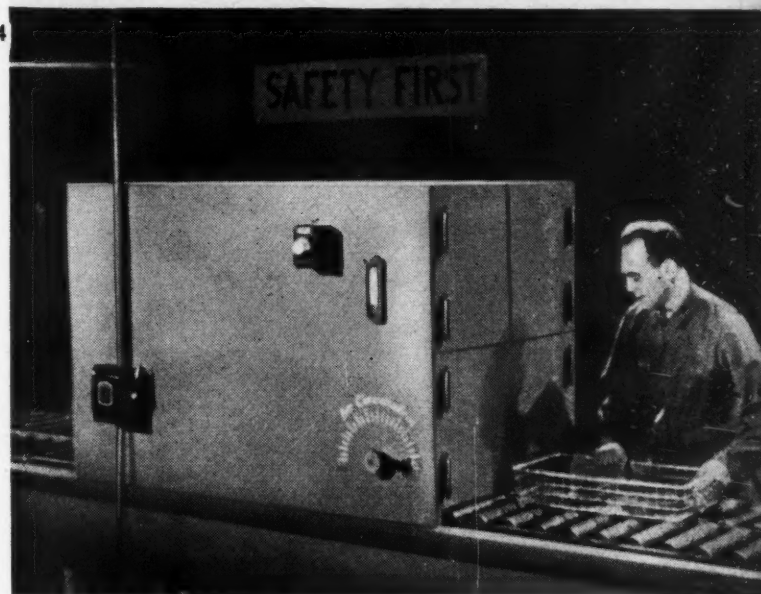
2. *Solvent thin-film type*—Materials of this class usually contain about 25% total solids dissolved in a petroleum solvent such as Stoddard solvent. The active ingredients usually consist of a base material, such as lanolin, petrolatum or mixtures thereof, plus a rust inhibitor such as the petroleum sulfonate type and an acid neutralizer such as an organic amine. These materials may in turn be subdivided into the water-displacing type and the non-water-displacing type. The water-displacing type contains, in addition to the above ingredients, surface active agents which enable it to displace water from the surface of metal parts. By virtue of this property, parts coming from wet grinders for assembly may be directly immersed in this rust-preventive solution with the result that the water will be completely removed from the part by

3



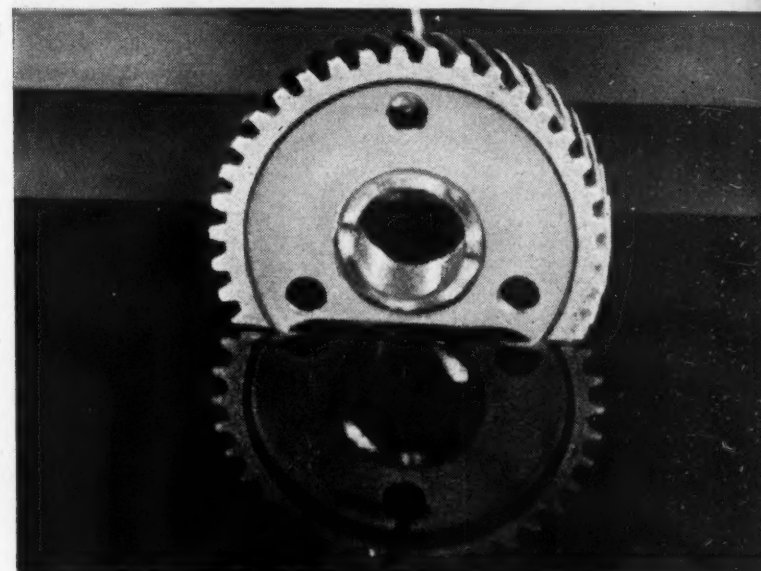
3—The metal part is blown with dehydrated compressed air to remove all traces of moisture before it is dipped into one of the temporary corrosion-preventive compounds.

4

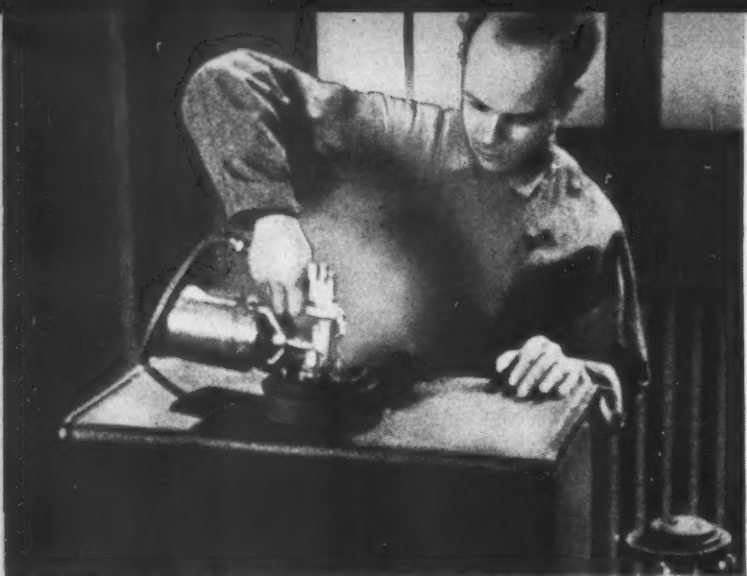


4—The parts may also be dried equally as effectively by passing them through a hot-air-circulating oven as shown.

5



5—The thoroughly dried metal part is then dipped in a thin film of corrosion-preventive compound as is this gear.



6



7

6—Temporary thin films or dual-purpose corrosion-preventive compounds are applied to interior surfaces by fogging with a spray gun. 7—Fingerprint removal is accomplished in same type of equipment as used for solvent cleaning. Methanol or a combination fingerprint remover and temporary rust preventive may be used here.

displacement and the part will emerge coated with a thin film of rust-preventive material. Materials of this type may in addition be compounded to have either fingerprint suppressing properties, fingerprint removing properties, or both. The non-water-displacing type is effective only on metal parts, surfaces of which are dry. It usually does not have fingerprint-removal properties, but may have fingerprint-suppression properties.

3. *Dual-purpose type*—The third classification may be called the dual-purpose type, since it consists of a corrosion inhibitor in a lubricating-oil base so compounded that it may perform the functions of both lubrication and corrosion protection. Materials of this type are frequently used not only as temporary corrosion preventives for protection of parts during processing, but also as the final lubricant in the completed assembly, where they also serve to furnish a certain amount of corrosion protection during the life of the product. Great progress has been made in the compounding of materials of this type. Where plain mineral oils containing no corrosion inhibitors may give protection life of 2 to 4 hrs. in the humidity cabinet at 100% relative humidity at 100 deg. F., some of these dual purpose lubricants and corrosion inhibitors may protect for periods of time as long as 400 to 500 hrs. under the same conditions.

4. The fourth method which is coming into increasing use is the use of air-conditioned rooms for the storage of parts during processing and assembly operations. The use of such rooms is of particular value where parts must be banked immediately preceding or immediately following inspection or assembly operations; for example, the precision inspection operations, where electro-limit gauges are used. It is frequently detrimental to have the parts coated with any type of organic film. If the surfaces are left dry, the handling incident to

inspection will produce rapid corrosion in the ordinary atmosphere.

However, if these inspection operations are done in a room where the temperature is maintained at 75 deg. F. with a relative humidity of 40% or less, no corrosion will occur for periods of several weeks, even on surfaces which are heavily fingerprinted. It is also possible to achieve similar protection by storage in rooms which are heated well above room temperature in order to produce a low relative humidity. A frequent provision is that the room be heated 20 deg. F. above normal room temperature or above 60 deg. F. in winter. This procedure is applicable to storage rooms; but is not applicable to inspection or assembly operations because in summer the comfort of the workers will not permit the use of sufficiently high temperatures to prevent corrosion.

Based upon the information outlined above, we may now select a series of recommended practices which will afford maximum utilization of these new techniques. These may be summed up in a series of general rules or statements concerning the proper sequence of operations in order to afford maximum protection. These rules are as follows:

1. Clean parts immediately after each group of machining operations.
2. Immediately after cleaning, apply a temporary corrosion-preventive compound.
3. Remove the corrosion-preventive compound before precision gauging operations by solvent cleaning, for example, by immersing in Stoddard solvent.
4. Store parts with unprotected surfaces in an air-conditioned room, maintained at a maximum of 40% relative humidity at 75 deg. F., during periods when surfaces are unprotected. As an

alternate procedure, reduce the time when unprotected parts are exposed to the atmosphere to a minimum of a few hours.

5. After handling, due to inspections, remove fingerprints by immersion in a fingerprint-removing solvent such as methanol.
6. Re-establish corrosion-preventive film before leaving air-conditioned room. Use dual purpose type where possible. In special cases, strippable hot-melt coatings may possibly be effective. (These applications will be described

more fully in a subsequent article in this series.)

7. Use gloves during final assembly operations in order to prevent recontamination of parts surfaces.

Close adherence to these procedures will eliminate the difficulties with rusted and corroded parts and will provide clean, uncontaminated surfaces for the application of final corrosion-preventive treatments.

(Final corrosion protection and unit packaging will be discussed in Article II of Dr. Waring's series).

8

8—Dipping a complete rifle in dual-purpose oil which both lubricates and protects against corrosion. Gloves protect the worker from oil and the gun from fingerprints.



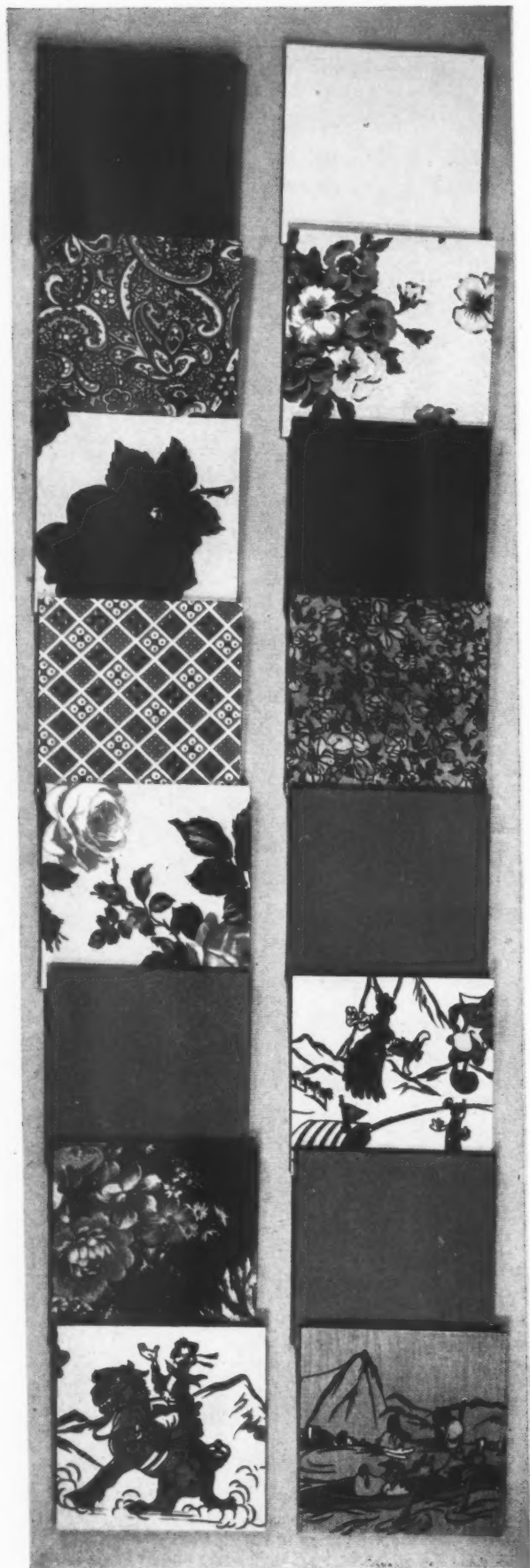
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9—In processing rooms such as this every effort is made to avoid handling the parts with bare hands after they have been thoroughly cleaned.



# Low-pressure resins . . . versatile new materials

by R. C. Evans and C. L. Jones, Jr.\*



The development of a new class of thermosetting synthetic resins variously described as "100% reactive," "impression molding," or "low pressure" resins offers to the packaging industry probably the most versatile new class of synthetic materials to come out of the war.

These thermosetting materials are differentiated from previously available thermosetting materials in that they react to a fully polymerized or cured state without the evolution of water, gas or other side products. In the case of previous materials, such as phenol or urea formaldehyde, the heat-curing reaction which produces a thermoset resin during molding involves a condensation process in which water is split off and evolved. Other by-products, such as ammonia, sometimes occur as well. In the case of the new materials, the thermosetting reaction proceeds without condensation or evolution by volatile by-products.

The new resin class is further differentiated from other thermosetting materials in that the cured resin can be perfectly clear and transparent and its transparency is stable over an indefinite period of time. The consistency may be controlled to yield hard, tough, rigid solids or, with slower cure rates, a range of softer, rubbery solids. In uncured form they may vary from relatively free-flowing to high-viscosity liquids.

The impression molding resins were developed originally to obviate the necessity of high pressures in producing plastic parts. In handling a conventional plastic resin the viscosity of the plastic mass necessitates the use of high pressures to push it into shape. In addition, high pressure is needed to hold in the volatile by-products which are evolved during the molding or laminating operation. The requirement of high pressure, in turn, means heavy and expensive equipment and matched tool steel dies, which together impose a definite size restriction on parts molded or laminated of conventional plastics.

Both these difficulties are overcome in impression resins. In the uncured state these new materials are liquid and thus require little or no pressure to get into required shape. And because they do not generate liquid or gaseous products in curing, they can be molded or cured under very low pressure or no pressure at all.

\* Of the Plastics Division, Monsanto Chemical Co., Springfield, Mass.

1—Impregnation and lamination of pigmented or printed paper and fabric surface sheets with low-pressure resins produces beautifully decorated, strong, rigid moldings like these—at low cost, in simple machinery. There is no distortion of pattern, as there would be in high-pressure lamination. These moldings can be of almost any size and shape; should have a variety of uses in packaging.

In effect, then, they make possible the fabrication of parts without limitations on overall size.

In molded parts the impression resins are always used in combination with fibrous fillers of which there is a wide range. Typical fillers are cotton duck, glass cloth, paper, felted cotton linters and cellulose pulp board. A wide variety of methods are used to combine the filler and resin, to shape them and to fuse them together in a hard, strong, rigid composite.

One of the most widely used methods is bag molding, of which there are several modifications in use. In simplest form the filler is draped over a mold which may be of wood, sheet metal, concrete or other relatively inexpensive material. As the layers of filler are laid up on the mold, liquid resin is applied to impregnate it. After layup, the whole assembly is covered with cellophane and then inserted into a rubber bag. The rubber bag is sealed around the assembly and then evacuated, causing it to cling with uniform pressure over the laid-up filler and resin. The assembly is then inserted into an autoclave and steam or a mixture of steam and air admitted. During the autoclave cycle the heat causes the resin to thermoset and to bond the filler into a one-piece unit.

This process or similar ones have been used successfully for the production of large parts, the most striking of which are the radar instrument housings called "radomes." Radomes have been produced by impression resins in very large quantities during the war and have been highly successful under severe conditions of aircraft service. A typical impression molded part, using glass cloth as the filler, provides an excellent combination of desirable properties. Among these are

TABLE I—PROPERTIES OF A TYPICAL GLASS CLOTH LAMINATE\*

ECC-165 glass cloth.....	53% by weight
XR535 resin.....	47% by weight
(Cross laminated to a total thickness of 0.175 in. at 10 p.s.i. for 20 min. at 220° F.)	
Flexural strength.....	61,000 p.s.i.
Edgewise compressive.....	41,000 p.s.i.
Rockwell hardness.....	M112
Water absorption.....	24 hrs.—0.5% 72 hrs.—1.0%
Heat resistance.....	After 1,000 hrs. at 230° F. no significant change is noticed in flexural strength
Coefficient thermal	
Cm./cm./° F.—longitudinal...	$7.8 \times 10^{-6}$
Cm./cm./° F.—transverse.....	$8.5 \times 10^{-6}$
Chemical resistance	
Aviation gasoline, %.....	0.2 loss
Prestone, %.....	0.1 loss
Flammability, burning in. per min. rate.....	Self-extinguishing
Specific gravity.....	1.77

\* Using Monsanto's "Thalid" resin.

light weight, wide range of color, excellent weather resistance, high water resistance, freedom from taste and odor, excellent chemical resistance and high heat resistance.

The weight of the finished part depends principally upon the filler used. In the case of Fiberglass cloth, specific gravity is well under aluminum and with other fillers even lower weight can be achieved.

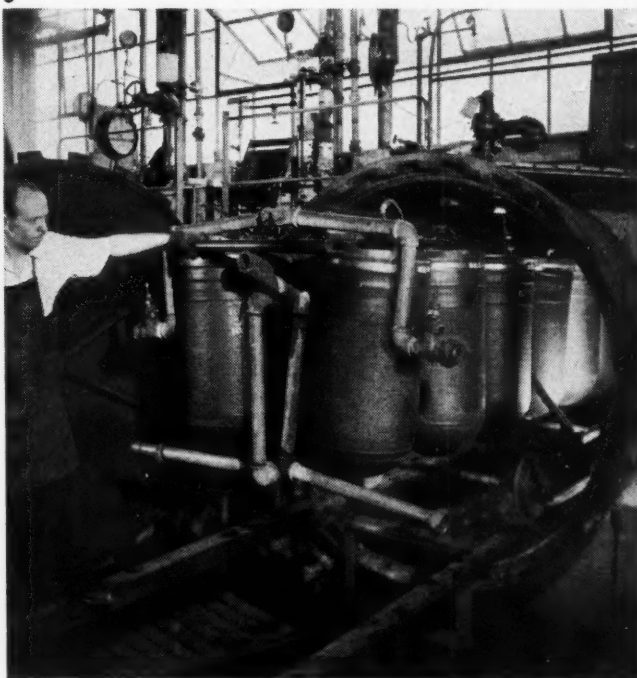
Used with proper fillers, molded parts or laminates of low-pressure resins have excellent water resistance. Water absorption under standard conditions is less than

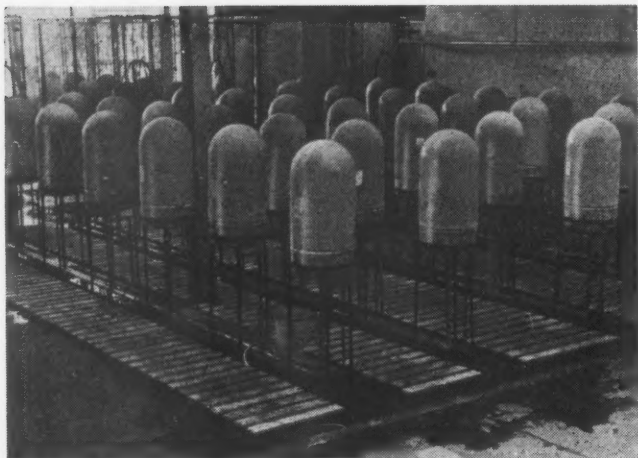
2—Making radar domes. Low-pressure resin is poured over glass cloth on form and form wrapped in cellophane. Proper distribution of resin is achieved in autoclave. 3—Radome layups, sealed in rubber bags, roll into autoclave 24 at a time. Heat and slight pressure from bag produce high-strength "molding" in two hours.

2 PHOTOS COURTESY MODERN PLASTICS

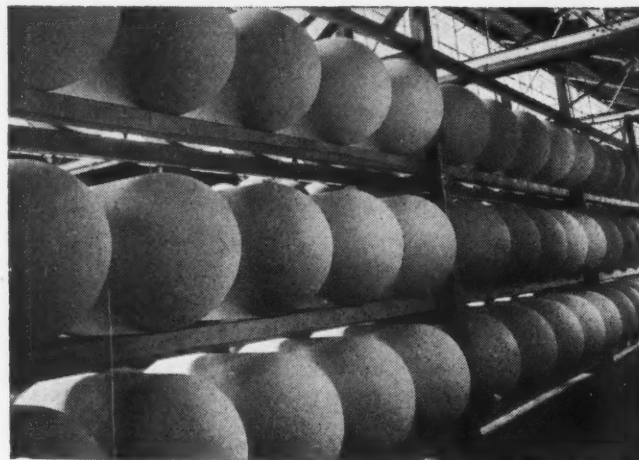


3





4



5

4—These test stands for hydrostatic test of the completed radomes show that low-pressure molding will withstand 25 p.s.i. internal pressure. 5—Completed radomes are stored in racks while awaiting further processing. It is not difficult to imagine very large and strong commercial containers manufactured this same way.

1%. Chemical resistance is excellent except to strong alkalis. The use of radomes under extreme climatic conditions has demonstrated the weather conditions of the materials.

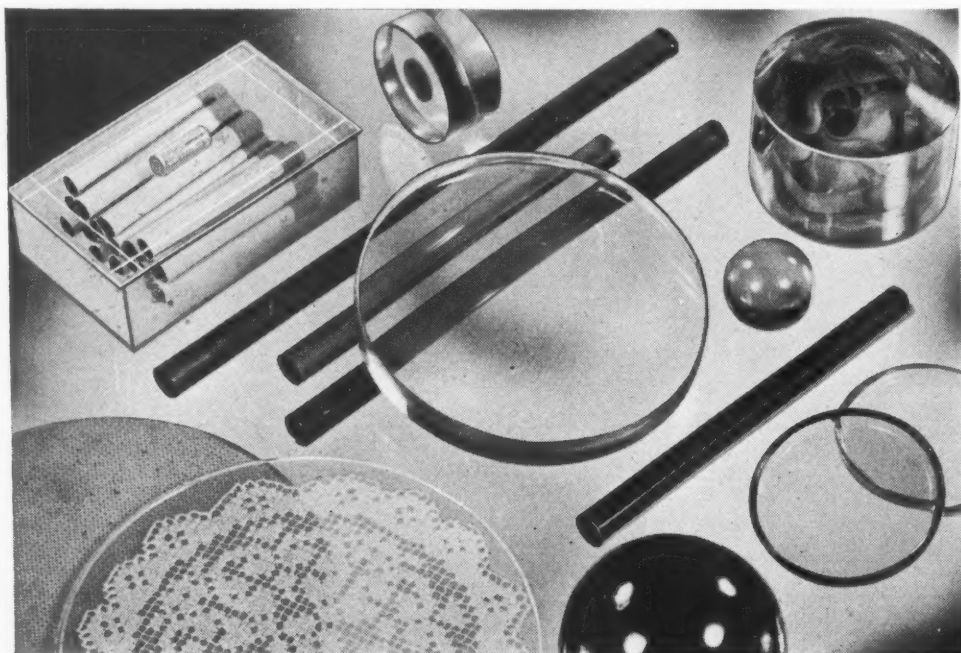
Of direct interest to packagers are the desirable appearance characteristics of the new plastic composite. The designer is given great freedom in obtaining a desired shape, surface texture, color or design. In using cloth as a filler, for instance, a print design or pattern can be used which is carried through to the final cured laminate. Permanent product identification, trademarks or distinctive pattern can thus be achieved in a highly serviceable, durable unit.

The packaging applications of the new plastic have not been explored to any appropriate extent. The first logical applications appear to be in lightweight drums, crates, counter displays, shipping containers, convert-

ible floor displays and similar relatively large package components above the size range of typical molded or fabricated units.

The resins alone, without fillers, can be cast without pressure into relatively tough, colorless transparent shapes. Molds of glass, plaster, rubber or soft metal may be used. The curing reaction which converts the liquid to a hard solid is initiated by temperatures under 250° F. The resultant products compare in strength to conventional pressure-molded plastics, although under present production methods they are somewhat more expensive.

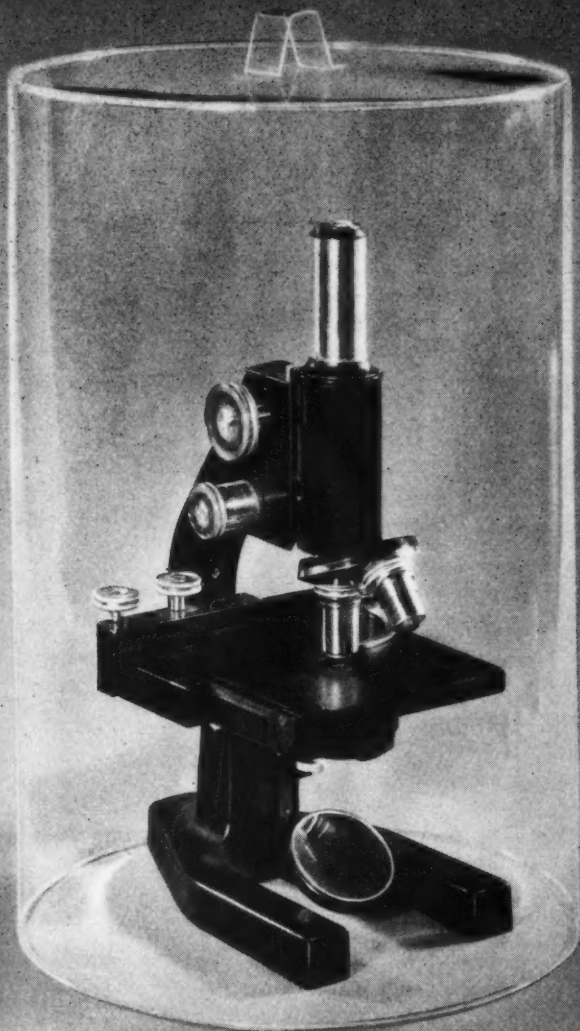
Because impression resins are so new and because development during the war was rigidly directed into certain channels, exploration of their uses in civilian packaging has hardly begun. They present a challenge to the package designer and engineer.



6

6—Low-pressure resins can be used for casting and contact laminating. These articles are made from allyl ester resins. Lace doily is laminated between two sheets of clear material. Castings are exemplified by artificial rose embedded in a solid block of plastic (upper right), cigarette box, disc and other shapes.

Kodak



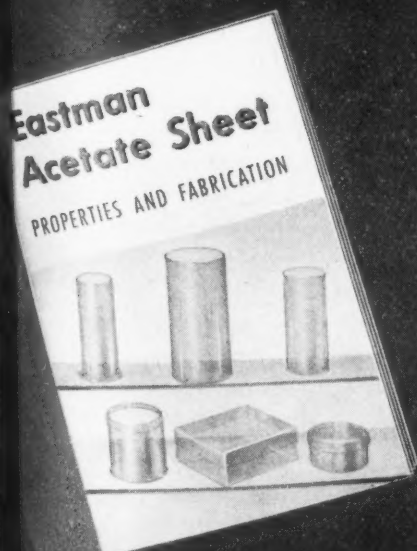
# COVER IDEA

Can you use it to your profit?

Here's optically clear Eastman Acetate Sheet protecting a valuable microscope. The same idea—adapted as needed—can do a similar job for any product requiring such protection.

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This folder gives essential fabricating data for Eastman Acetate Sheet. Write today for your copy.



BACK from military and naval service, Eastman Acetate Sheet is ready for civilian work . . . offers practical new approaches to many critical packaging problems.

Known *prewar* as "the clearest way" to make a package into an "individual showcase," this material now branches out into wider fields . . . as wide as your own imagination . . . as BIG as the ideas to which you devote it. Eastman Acetate Sheet gives any product added "sales appeal." With full display, it protects against dust, dirt, shopwear, and handling.


Hard to fabricate? *Not at all!* You'll find that Eastman Acetate Sheet is easily folded, drawn, beaded, or scored . . . fabricated just about as you please. Be ready for business *today* with the package of *tomorrow*. Investigate Eastman Acetate Sheet. For full information, write:

**Cellulose Products Sales Division**

**Eastman Kodak Company, Rochester 4, N. Y.**

## EASTMAN ACETATE SHEET

attracts . . . protects . . . sells



# Questions and ANSWERS

*This consultation service on packaging subjects is at your command. Simply address your questions to Technical Editor, Modern Packaging, 122 East 42nd St., New York 17, N. Y. Your name or other identification will not appear with any published answer.*

## Equipment for solvent adhesives

**QUESTION:** *We would like to use a solvent-type adhesive on the back seam of our cellophane bags. We have been using regular pastes and glues for paper bags on this machine and would like suggestions as to the kind of applicator and fountains for the solvent type adhesive.*

**ANSWER:** You should discuss your problem with several suppliers of solvent-type cellophane adhesives. These suppliers will give you samples and data of the various kinds of such adhesives. Their service departments may be able to tell you exactly the proper adhesive for your bag machine and type of cellophane.

In any event, you will have to make certain changes in your adhesive applying mechanisms to use solvents instead of water soluble adhesives. The applying wheel should be quite narrow and preferably grooved in center to apply two narrow lines of adhesive. The amount of adhesive must be carefully controlled by a doctor blade or metering device operating against the applicator wheel, which must be power driven. The adhesive reservoir must be as nearly completely enclosed as possible to minimize the effect of solvent evaporation with resulting change of the viscosity of the adhesive. You will probably find that the most satisfactory type of solvent will be the higher boiling point type since such solvents will give you less difficulty with evaporation losses. You should have several complete applicator units cleaned up and ready for insertion into the bag machine in case of gumming up of the adhesive, etc.

You should also arrange to replace the complete applicator unit periodically and to remove the unit at the beginning of any shut-down periods. If these precautions are not followed, the applicator unit will become gummed up with dried solvent and you will experience a great many losses in bags, as well as shut-down time on your equipment. Here again, you should follow strictly the advice of your adhesive supplier.

## Wax-laminated structures

**QUESTION:** *We have been experimenting with a wax-laminated structure in the manufacture of bags of various*

*constructions. We have been particularly interested in glassine laminated to kraft paper with a waxy adhesive, but we have been bothered by finished bags failing by separation of the glassine to the kraft. The adhesives we have been using are of an aqueous type. Can you suggest any means to overcome this difficulty?*

**ANSWER:** You do not describe in any detail the tests to which you subjected these bags to obtain this failure of the waxy laminant. Neither did you mention the composition of the particular waxy-type laminant you are using.

You must appreciate the fact that it is not possible to obtain a waxy-type laminant of any formulation which will have enough adhesive strength between the plies so that it will not fail before the aqueous adhesive used to make your seals. It is a very simple matter to paste glassine and kraft together in such a way that they cannot be separated except by tearing of the plies. It is not possible to make a waxy-laminant for adhering the glassine to the kraft of such strength that the sheets cannot be parted intact if carefully done. It should be possible, however, to obtain a lamination of glassine to kraft with a waxy-type adhesive which would be sufficiently strong for all practical purposes.

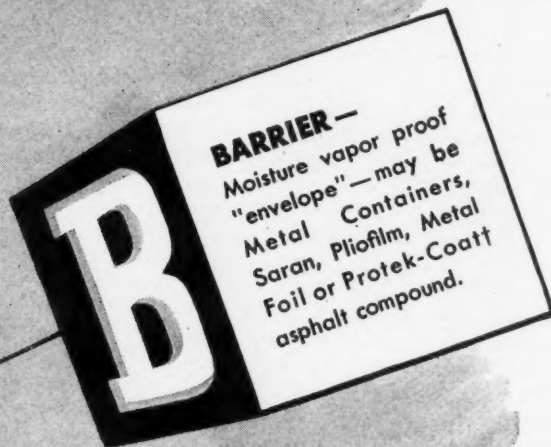
It may be that your adhesive line is very close to the edge of the stock and the drying of the aqueous adhesive may distort the seal enough to start delamination. If this condition is occurring, it could be helped by setting the adhesive line away from the edge of the stock at least  $\frac{1}{8}$  in.

You should also obtain some stock with a number of different types of waxy laminants. There are many modifying agents for waxes which make it possible to make a laminating agent which has a much higher internal strength and adhesiveness than can be obtained by the use of straight waxes, even of the improved amorphous types. These improved waxy laminants will have a wide range of temperature flexibility, improved water-vaporproofness, as well as high ply strength, if properly applied. Your paper supplier can obtain for you samples of such combinations which should have sufficient durability for practical bag-making requirements.

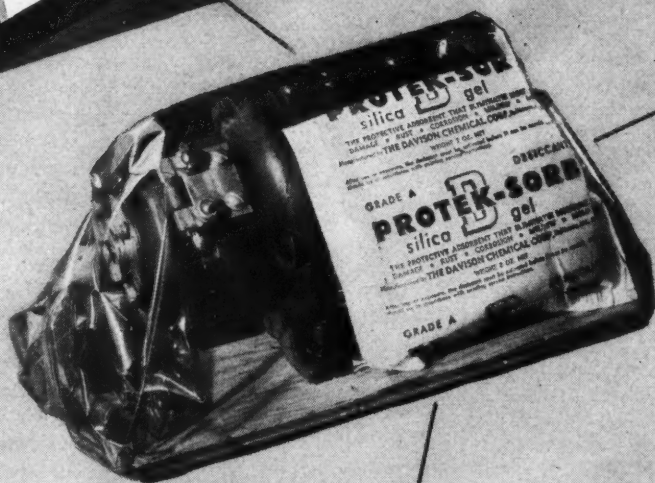
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**ADSORBENT —**  
Protek-Sorb silica gel  
—keeps the interior  
of the package al-  
ways safe against rust,  
corrosion, mildew and  
mold by capturing  
and holding the mois-  
ture vapor.



**BARRIER —**  
Moisture vapor proof  
"envelope"—may be  
Metal Containers,  
Saran, Pliofilm, Metal  
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**CUSTOMER  
SATISFACTION—**  
Goods received fac-  
tory fresh, ready for  
immediate use. Clean-  
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adjustments eliminated.

When the simple techniques outlined by Davison Field Engineers are adhered to, Davison Dehydrated Packaging—using Protek-Sorb\* silica gel as the desiccant—is guaranteed to give protection against all moisture damage to goods in storage and transit.

Davison Field Engineers are available for consultation and direction at no cost to the manufacturer. They will show how to meet specific problems efficiently and economically.

†T.M. applied for.

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*Progress through Chemistry*

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JANUARY • 1946 145



# WASHINGTON REVIEW

● **Processed Vegetables in 1946**—The Bureau of Agricultural Economics forecasts that commercial production of truck crops for processing in 1946 probably will be somewhat below high wartime levels, but adds that "production for processing has grown, and is expected to continue to grow, at a faster rate than has our total population.... A growing proportion of total commercial production of truck crops has been and will be, used in canned and frozen form."

While canning will continue to be the major form of vegetable processing for a number of years, the BAE, in its annual 1946 outlook number of "The Vegetable Situation," foresees that "commercial freezing of fresh vegetables, which at present provides an outlet for less than 2% of the total commercial production, is expected to grow rapidly and, within the next 10 years, may reach sufficient volume to offer strong competition to fresh vegetables at retail."

On the subject of dehydrated vegetables, production and packaging which made great strides during the war, the Bureau says, "Production of dehydrated vegetables in 1946-47 will show a considerable drop from their wartime peak of nearly 200 million lbs. (dehydrated weight). The extent of the decrease in production will depend mainly on the cut in military and war-service requirements. The principal civilian requirements probably will be for soup mixes and food seasonings. The size of the dehydrated vegetable production in the future years will depend primarily on their quality, convenience and cost factors in competition with fresh frozen and canned vegetables."

● **Reversion to Cans?**—Many packers of non-food products as well as food processors are looking into the possibility, if not actually preparing to offer their products packed in cans as a result of the recent rewriting of Conservation Order M-81. The amended order removes all restrictions on the quantities of cans which may be purchased or used by any industry. However, it retains the schedules prescribing the use of tin plate and terneplate in the manufacture of cans. Tinplate and terneplate continue to be restricted to a list of food products and a limited list of non-food products.

Efforts of interested groups to have the

restrictions lifted on packaging of dog food, shortening, coffee and beer in cans were unavailing in so far as the current draft is concerned, but Civilian Production Administration is understood to have indicated it would have another look at the situation in February, at which time these items would again be considered seriously.

● **Tin Control Order**—In order to strengthen controls for implementing the international allocation of tin, which is still in critically short world-wide supply, CPA has placed this metal again under controls of the general imports Order—M-63.

Tin bars, blocks, pigs, grain or granulated, and tin alloys, including alloy scrap, which have been returned to M-63, were removed from import control in August of 1944 because under wartime conditions importation of them was not feasible.

● **Packaging Used as Control Medium**—By limiting the size of packages in which lard, shortening, salad and cooking oils are packed, the Agriculture Dept. hopes to keep institutional and industrial users from getting more than their proportionate share. The Agriculture order requires manufacturers to put these products up in the same proportion of household, industrial and institutional size packages as they did during the rationing period. Nothing in the order, however, prevents large users, such as hotels and restaurants, from buying household-size packages, although Agriculture officials believe the additional cost of the smaller packages might prove somewhat of a deterrent.

● **Increase in Paper for Commercial Use**—Already felt is the relaxation in paper availability as a result of the CPA amendment of M-241 decreasing the Government set-aside reserves of current paper production from as high as 20% to 10%.

● **Burlap in Better Shape**—Burlap bag manufacturers and other users of this fibre in the United States are awaiting action of CPA on the recommendation that the existing Raw Materials Board's allocation of jute goods be terminated, on the basis that India now appears to be in a position to

meet the world's needs for burlap and other jute products.

The recommendation, made by the Burlap Importing and Bag Mfg. Industry Advisory Committee, was backed up with data showing that burlap production estimates furnished by reliable Calcutta shippers indicate a substantial increase in production as compared with that prevailing at the time allocations were fixed. It is estimated that current Indian production is running at the rate of approximately 180,000,000 yds. per month, as against average production in the July to September period in 1945 of approximately 132,000,000 yds.

● **Government Specifications Set-up Re-organized**—Treasury Dept.'s Procurement Division has recently issued a new list of the Technical Committees operating under the Federal Specifications Board—some 74 committees in all, with a total membership of some 1300 experts from the various Government agencies. Committees whose functions enter the packaging field, together with their chairmen, follow:

Chemical products, Wiley C. Smith, Treasury Procurement Division; color, W. D. Appel, Bureau of Standards; cordage, G. I. Dewey, Navy Dept.; glassware, chinaware, stoneware, etc., H. Hahner, Bureau of Standards; inks, type-writer ribbons and carbon paper, W. Harold Smith, Bureau of Standards; leather and leather products, E. L. Wallace, Bureau of Standards; lumber, Lawrence W. Smith, Agriculture Dept.; metals (no chairman, in process of reorganization); paints and varnishes, E. F. Hickson, Bureau of Standards; paper and paper products, B. W. Scribner, Bureau of Standards; plastics, organic, Dr. G. M. Kline, Bureau of Standards; shipping containers, H. L. Whittemore, Bureau of Standards; stitches, seams and stitching, W. D. Appel, Bureau of Standards; textiles, Mr. Appel; wire screens and wire cloth, Dr. L. V. Judson, Bureau of Standards; wood preservatives, R. K. Helphenshtine, Jr., Agriculture Dept.

Initiation or revision of any federal specification may be recommended by any member of the Board or the technical committees, any Government agency, or by industry.



*"Well, then, suppose you set the price"*

THIS hapless mug dickering for the Brooklyn Bridge, isn't, we'd have you know, a Crown customer. Crown customers are smart. That's why they buy from Crown. They realize that Crown's fair price policy is highly advantageous . . . They know that all comers to Crown are

treated alike, and treated right! Copy book stuff? Of course! Crown customers have found it a mighty profitable angle. We have and so will you.

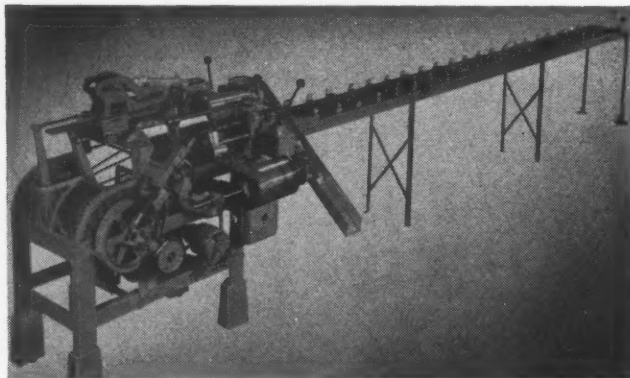
**CROWN**

FINE METAL CONTAINERS

# Equipment and Materials

## VEGETABLE WRAPPING MACHINES

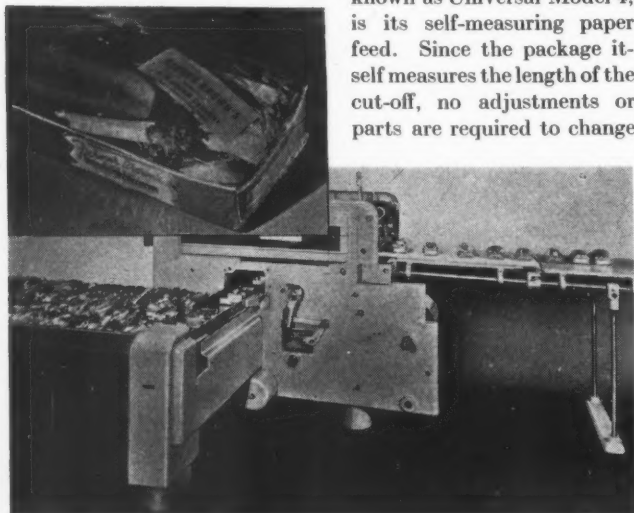
Hayssen Mfg. Co., Sheboygan, Wis., announces a new tomato wrapping machine embodying such features as automatic flap tucker, thermostatic heat control, automatic take-off and unloading chute, as well as facilities for electric eye registration control. Adaptable for wrapping all types of fruits packaged in tray-type cartons, the machine is quickly adjustable—employing



heat as the sealing medium—using either heat-sealing cellophane or waxed paper. When equipped with electric registration control, it can handle either plain unprinted wrappers, “hit and miss” printed wraps, or registered printed wraps merely by flipping a switch, with no mechanical adjustments required. Using wrappers in roll form, the machine automatically measures and cuts the required length of paper, wrapping and sealing it around the packages, then delivers them back to the operator at a maximum rate of 2,100 per hr.

Loading and unloading are done at the same end of the machine, and require one operator if done manually, or for automatic loading and unloading machine can be hooked into line conveyors.

Another new vegetable wrapping machine—the development of Package Machinery Co., Springfield, Mass.—is now in use at the Farmer Brown Cannery of the same city. This machine is adjustable for various sizes of trays within the following limits: length, 6 to 18 in.; width,  $2\frac{1}{2}$  to  $7\frac{1}{2}$  in.; height,  $1\frac{1}{2}$  to 6 in. No parts are needed to adjust the machine for different sized packages. Adjustments in length are made quickly and easily by turning a hand-wheel and no adjustment is necessary for the thickness or width of the package. An outstanding feature of this machine,



known as Universal Model 4, is its self-measuring paper feed. Since the package itself measures the length of the cut-off, no adjustments or parts are required to change

the length of the cut off and a well-formed wrap is assured.

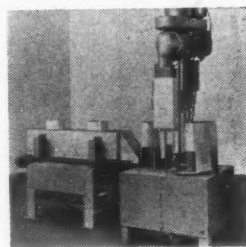
An automatic device for attaching an outside label can be provided, as well as an automatic printing device for pricing and dating. Likewise a printed band that serves as an easy-opening device may be applied under the cellophane. Speed range of the machine is 25 to 55 per min.; smaller model, from 13 to 35.

## NEW VINYL WHITE COATING ENAMEL

Roxalin Flexible Finishes, Inc., have introduced a one-coat vinyl white coating material said to be resistant to food acids and fats, and provide stability under high and repeated baking temperatures. The material, being odorless and tasteless, should prove extremely valuable for sanitary lining coatings on foodstuff containers requiring pasteurization, sterilization and processing. An outstanding characteristic is its extremely high solids—52 per cent—or as much as twice that of conventional types. This increased pigment imparts a hiding power said to be equal to two coats of ordinary vinyl materials.

## PACKER-WEIGHER FOR POWDERED PRODUCTS

J. L. Ferguson Co., Joliet, Ill., has announced a new convertible packer-weigher for packaging flour and other soft powdered products into bags, cans or cartons. Entirely automatic in operation,



the Turret Type Auger Packer-Weigher fills approximately 90% of the total net weight into the container at the first station. The container is then lowered and delivered to the gross weigher platform where the filling operation is completed and then the container is transferred to the discharge turret plate. A single operator registers the container on the packing station tube.

Special features of the machine include the use of interchangeable augers and tubes for quickly switching from one container size or weight to another; adjustable drive for lowering of packing platform to provide for pack density required; provision for extra plunging or settling stations; non-choke horizontal spiral feed of product to both bulk and dribble augers; and individual motor drives with reverse switches for instant cut-off.

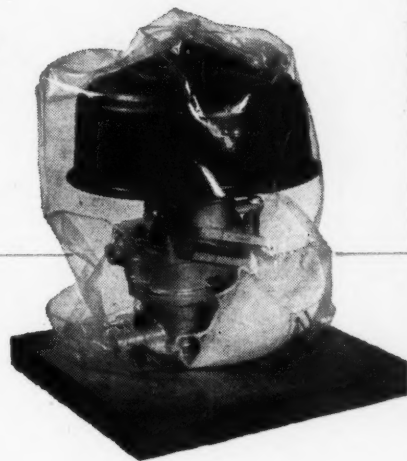
## FROZEN FOOD CARTON FILLER

Now in commercial production at the Food Machinery Corp.'s Sprague-Sells Div., Hoopeston, Ill., is their new frozen food carton filler, with opener and closer, designed specifically to meet the requirements of packers of free-flowing frozen foods. The machine automatically opens, fills and closes the cartons at speeds ranging from 80 to 100 cartons per min. Operation of the machine is as follows: Flat-folded cartons are stacked into the magazine from whence they are ejected mechanically into an automatic opener that sets them up ready for filling. The erected cartons move along a conveyor into the filling unit and are registered under rotating filling stations. At this point a safety mechanism stops the filler momentarily if a carton is missing or not properly erected. Free-flowing foods are fed from a hopper into adjustable volumetric measuring pockets and the correct volume is then dropped into the cartons below the pockets. Fill is extremely accurate, the company states, well within the maximum tolerance of  $\frac{1}{4}$  oz. per carton in any size up to one pound. Cartons are vibrated while under the filling stations. The filled cartons are then carried through a device which closes them and forms the filled cartons into proper shape.

it "delivers  
the goods"



*Clean and Ready  
to Use!*



It's just plain common sense to give fine metal products and parts the utmost protection—in transit and in storage—to keep them in top condition, ready for immediate use.

And for this important job, there are hundreds of instances throughout the automobile and aviation industries where Saran Film—tough plastic protection developed by Dow—is indispensable in meeting the most exacting requirements.

Saran Film proved its worth on even the most difficult war assignments. It kept vital plane and automotive parts clean and dry, free from rust and corrosion in the moist salt air of the Pacific. It stoutly met demands of rigorous climatic conditions across the globe.

In Method II packaging, Saran Film now is ready and able to perform the same kind of service in peacetime industry. It "delivers the goods"—machined products, electric motors, precision instruments, metal parts and assemblies—*clean*, and ready to use!

*Saran film*

KEEPS MOISTURE IN ITS PLACE

**PRESENT AND POTENTIAL USES:** Dehydrated packages for metal parts and assemblies, corrosive and anhydrous chemicals; bottle closure liners; flexible containers requiring moisture vapor imperviousness, etc.; shows promise as visual sales aid of exceptional merit.

**PROPERTIES AND ADVANTAGES:** Highest degree protection against moisture vapor transmission; soft; pliable, yet tough and strong; corrosion and chemical resistant; clear, transparent film; possesses exceptional flexural strength.

**THE DOW CHEMICAL COMPANY • MIDLAND, MICHIGAN**

New York • Boston • Philadelphia • Washington • Cleveland • Detroit  
Chicago • St. Louis • Houston • San Francisco • Los Angeles • Seattle



**PLASTICS**

FOR BETTER PACKAGING:

SARAN FILM • ETHOCEL SHEETING • STYRON

# Plants and People

**P. M. Gilfillan**, president of **Western Products, Inc.**, announces the purchase of a new plant at Newark, Ohio, to house the principal manufacturing activities of the corporation. The new plant will manufacture new and unusual forms of low-pres-



*P. M. Gilfillan*



*B. W. Kelsey*

sure laminated plastics and convert such materials as laminated and coated metal foils, transparent films, fabrics and papers into functional and highly styled packaging materials. The plant will be under the direction of **B. W. Kelsey**, vice-president in charge of manufacturing.

Construction of the new home of **Modern Packages, Inc.**, Memphis subsidiary of **American Coating Mills**, Elkhart, Ind., is under way, according to **R. L. Snideman**, president, and **H. Victor Bray**, vice-president and general manager of the package manufacturing concern. Cost of the new plant will be \$500,000, and the new facilities will permit a substantial increase in production and personnel. The company will produce all types of folding cartons for foods, drugs, cosmetics, beverages, etc., as well as advertising displays and other specialties of general use in the packaging field.

First models of the new **Lawson** paper-cutting machine will be made available in the first part of 1946, according to **William J. Hourigan**, treasurer of the **E. P. Lawson Co.**

The **Celanese Corp. of America** acquired a new plant at Belvidere, N. J., for the production of chemicals, plastics and related products. Present plans call for an ultimate expenditure of more than \$10,000,000. Operations at the company's Newark, N. J., plant will continue and a 25% expansion of facilities planned for the next two years is in progress. The new plastic "Forticel" will be produced at the Belvidere plant and sold through the company's subsidiary, **Celanese Plastics Corp.**

**Capt. Shy Rosen** has rejoined **Milprint, Inc.**, Milwaukee, packaging converters, printers and lithographers, as director of eastern operations. **Bert Hefter**, who directed operations while **Capt. Rosen** served with the armed services, has returned to the company's executive staff at the home office. Other men returning to the organization on their release from the service are **Don Faulkner**, who joins **Capt. Rosen** at the New York office; **John Sevic** of the Chicago office, and **Frank Towel** in Boston. **Milprint** also announces that **Elmer C. Rowley** is joining the company as sales representative working out of the San Francisco office.

**Tennessee Eastman Corp.**, of Kingsport, Tenn., has established New York sales offices at 10 E. 40th St. **A. M. Tenney Associates, Inc.**, will continue as sales representative for the company's acetate rayon and staple fibre; sales of Eastman's

plastic, Tenite and cellulose esters in the New York area will be handled by **William L. Searles**, and **F. L. Bume** will have charge of the company's acetate dyestuffs sales. Advertising will be directed by **R. C. Tuttle**.

An expansion program involving the expenditure of over \$5,000,000 during each of the years 1946 and 1947 is now under way at Kingsport. Operation of three new buildings is scheduled to begin next July 1, one to produce cellulose esters, another acetate yarn and the third to produce acetate staple. A 30% increase in Tennessee Eastman's capacity for production of yarn, staple and Tenite is expected by the end of 1946.

**Continental Can Co. Inc.**, announces the following personnel changes: **M. O. Roberts** as manager of production planning, pacific division, to succeed **John S. Raleigh**, who returns to New York as staff assistant to **Lloyd H. Skouger**, general manager of the production planning department; **O. C. Johnson** as assistant manager, customer research, central division, to replace **M. H. Taras**, who resigned; **John A. Benjamin** as acting general manager of the plastics division, Cambridge, O., to succeed **J. E. Wolfe**, who resigned. A separate sales district in Continental's central division has been formulated to be responsible for sales to meat packers, particularly in the Chicago area. Sales manager for meat packers' cans in the central division is **J. P. Louderman** and, for the Chicago district, **W. B. Larkin**, both of whom will report directly to **R. L. Perin**, general sales manager of the central division. Temporarily the new sales district will be located in Continental's Stock Yards Plant, Chicago.

**Walter C. Granville**, color technologist, has joined the staff of the **Color Laboratories** division of the **Container Corp. of America**. He was formerly with the **Interchemical Corp.**

The Board of Directors of **Crown Cork & Seal Co., Inc.**, announces the election of **John J. Nagle** as president, effective Jan. 1. **Charles E. McManus** has resigned as president, but con-



*J. J. Nagle*



*C. E. McManus*

tinues active participation in the company's affairs as chairman of the Board. **F. Erwin Fusting** succeeds Mr. Nagle as treasurer and will continue as vice-president, while **Walter L. McManus** will succeed Mr. Nagle as secretary. Election of **Charles E. McManus** as chairman of the Board of Directors of **Crown Cork International Corp.** and his resignation as president was also announced. **Charles E. McManus, Jr.**, was elected his successor as president of the corporation.

**Neil A. Fowler**, vice-president of the **General Box Co.**, is the recipient of one of the first Cer- (Continued on page 160)

*Whether you ship by*

• **AIR**



• **RAIL** *or*



• **TRUCK**



*Gaylord  
Boxes*

assure **G**REATER PROTECTION

CORRUGATED AND SOLID FIBRE BOXES •

FOLDING CARTONS •

KRAFT GROCERY BAGS AND SACKS •

KRAFT PAPER AND SPECIALTIES •

**GAYLORD CONTAINER CORPORATION**

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# For Your Information

The Chicago Professional Paper Group's regular monthly meeting in November was addressed by Lt. Col. James d'A. Clark, of the U. S. Quartermaster Depot Subsistence Laboratory. The speaker touched upon the accepted tests for each paper characteristic, their relative importance and interlocking relationship, and gave his opinion regarding the merits of various instruments whose methods differ but result in the same tests.

"Plastics—The Story of an Industry" is a booklet containing authentic information about plastics which has just been issued by The Society of the Plastics Industry, Inc. The booklet was prepared by the Society in cooperation with the foremost men in the industry and contains many interesting illustrations.

Arrangements are completed for the first annual convention and exclusively industrial packaging show by the Industrial Packaging Engineers Assn. of America, to be held at the Hotel Sherman, Chicago, April 24-26. R. Frank Weber, president of the association and chief packaging engineer for International Harvester Co., announced. Irving J. Stoller, of Bradner Smith & Co., is chairman of the convention committee. Close to 100 exhibits will display materials and equipment and present the latest developments in packaging, processing, palletizing and crating. Headquarters of I.P.E.A.A. are at 134 S. LaSalle St.

Report 2 of the series on "History of Packaging During World War II" published by the Packaging Institute has just come off press. Willard F. Deveneau edits the series of which No. 2 is entitled "Set-Up Paper Boxes." Generously illustrated, the booklet is a complete study of the paper box written in terms intended for every user. Appended are all the principal regulatory Government orders issued by WPB and OPA. Further information about the series may be had by addressing the Packaging Institute, Inc., 342 Madison Ave.

The first issue of "Plastics Newsfront," publication of the plastics division of the American Cyanamid Co., has just been distributed. Copies may be obtained from 30 Rockefeller Plaza.

The Shopsin Paper Co., New York, recently formed by Morris and Sidney Shopsin, will manufacture quality cardboards suitable for showcards, displays, printing, advertising and allied industries, as well as drawing boards, photomount stock, picture mats and other specialty cardboards.

"Planning and Layout" was the topic of a talk by Dean Brown Becker, Ch.E., director of the total project engineering division of Barnes & Reinecke, Chicago, before the November meeting of the Industrial Packaging Engineers Assn. of America at the Hotel Sherman, Chicago. Illustrating significant points with slides, Mr. Becker emphasized the concept of packaging as a continuation and component part of total production, in which important gains in efficiency may be obtained with proper layout and equipment.

A recent experiment by The Bemis Bro. Bag Co., St. Louis, Mo., to test the strength of their multiwall paper shipping sacks was conducted at Niagara Falls. At 11:00 o'clock one morning three Bemis bags of special heavy-duty construction, each holding 50 lbs. of flour, were placed in the river above the Falls, and were plunged down 167 feet. At 6:30 P. M., 7½ hrs. later, the first bag was recovered under the Falls, intact and capable of being shipped as a commercial container.

The Society of the Plastics Industry, Inc., announces the launching of a nation-wide informative labeling program designed to tell the buyer the quality of his plastic purchases and how the

article should be used to derive the best results from it. A survey among retailers brought out the need for informative labeling, and the program has the endorsement of leading retailers and materials manufacturers. Guidance in undertaking this move was provided by an Informative Labeling Committee of SPI, which drafted a set of suggestions for manufacturers. As a service to manufacturers, SPI has issued a booklet entitled "Informative Labeling Guide," copies of which are available on request to the Society. This Guide contains basic descriptions of various plastics used in consumer goods and provides suggestions on how labels may be prepared. The Committee has made clear that no attempt is made at standardization of labels, that choice of style is left to the manufacturer. The need for informative labeling of plastic products was noted in the Oct. 1945 issue of *Modern Plastics*, pp. 99-105, in an article entitled "I Don't Know."

The Emloid Co., Inc., Arlington, N. J., has available for distribution a brochure entitled "25 Years of Progress in Plastics" which traces the growth of the company and lists its services.

Publication of a supplement to "The Law of Food, Drugs, and Cosmetics," written by Col. H. A. Toulmin, Jr., in 1941, has just been announced by the W. H. Anderson Co., of Cincinnati, O., publishers. Col. Toulmin has included in the supplement all new regulations adopted during the past three years, as well as the latest court decisions.

H. J. Hendy, of Paper Products, Ltd., was elected chairman of the New South Wales Package Mfgs. Assn. at its recent annual meeting in Sydney, Australia. Other newly elected officers include J. R. Firth, of P. J. Firth Pty., Ltd., chairman of the box section, J. Z. Padman, of J. Fielding & Co., Ltd., chairman of the carton section, and Mr. Hendy, chairman of the container section.

A colorful brochure entitled "Earned its Ribbons on Every Front" is being distributed by the Weatherproof Corrugated Box Group to acquaint industry and the public with the outstanding wartime developments in weatherproof corrugated boxes. Copies of the booklet may be obtained from the association's offices at 735 Eleventh St., N.W., Washington 1, D. C.

The National Canners Assn. announces its forthcoming annual meeting will be held at Atlantic City's Convention Hall from Sunday, Feb. 3, through Friday, Feb. 8. Exhibits and discussions at this year's meeting promise to be the most significant in recent years. The Atlantic City Convention Hall has also been selected as the site for the 1946 Packaging Exposition from April 2 to 5.

Manufacturers concerned with the attractiveness and utility of their metal products will find the new "Metal Craft Brochure" issued by L. F. Grammes & Sons, Inc., of unusual interest. Reproduced in full color, the catalog illustrates and describes new techniques and processes in fabricating and beautifying metal products and assemblies.

Nine primary operations in the fabrication of sheet plastic articles, and the equipment which may be used, are described and illustrated in a new 12-page booklet, "Forming Articles from Extruded Tenite Sheeting," just issued by Tennessee Eastman Corp. Publication of this fabricator's guide to the use of Tenite sheeting follows the company's recent announcement of the development of sheeting produced by the continuous extrusion of Tenite in a booklet entitled "Tenite Extrusion." Copies may be obtained on request from the Tennessee Eastman Corp., Kingsport, Tenn.

**avoid damage  
from "in-the-package"  
moisture**



**no rust  
no corrosion  
in this container**

**SHIPPER!** Your product can be seriously damaged by rust, corrosion, or mildew . . . because of "in-the-package" moisture. Avoid such damage. Include Jay Cee Silica Gel, the ideal drying agent, in the packages with your product.

Your container may be sealed "tight as a drum" against outside moisture. Yet, the vapor within can cause untold harm. Particularly, a slight drop in temperature can release dangerous moisture.

Jay Cee Silica Gel keeps the air in the package dry . . . adsorbs the vapor . . . prevents moisture damage. Jay Cee Silica Gel is a crystalline substance resembling rock salt in general appearance . . . chemically inert. Has amazing power to take up moisture without its particles changing in size or shape. Packed in 1, 2, 4, 8 oz. and 1 and 5 lb. bags. Used widely with shipments of metal parts, precision instruments, electronic equipment, dehydrated foods, fabrics, and chemicals.

The illustration shows Mr. Otto Mueller, packaging foreman, inspecting one of his Ampro Sound-On-Film Projectors sealed tightly within a representative moisture vapor-proof barrier, ready to be placed in a shipping carton. Packed within the barrier, with the Projector, are three small bags of Jay Cee Silica Gel . . . which adsorb "in-the-package" moisture and prevent damage from rust or corrosion.  
(Cellophane packaging was used in this illustration as a substitute for the actual wrapping).



**JOLIET CHEMICALS, LTD.**  
112 INDUSTRY AVENUE  
JOLIET, ILLINOIS

# U. S. patent digest

edited by H. A. Levey

This digest includes each month the more important patents which are of interest to those who are concerned with packaging materials. Copies of patents are available from the U. S. Patent Office, Washington, at ten cents each in currency, money order or certified check; postage stamps are not accepted.

**Feeding Mechanism for Container Parts**, J. A. Moore (to American Can Co., New York, N. Y.). U. S. 2,387,766, Oct. 30. In a feeding mechanism for sheet material blanks, the combination of a support for the blanks and means for advancing the blanks along said support.

**Multi-Compartment Carton**, M. I. Williamson, New Haven, Conn. U. S. 2,387,790, Oct. 30. A multi-compartmented carton comprising a blank of foldable sheet material folded upon itself to form wholly peripherally-walled compartment structures disposed in common on one face of the blank and at opposite lateral sides of an intermediate portion thereof.

**System of Producing Evacuated Packages**, J. R. Sonneborn & J. Y. Albertson (to Stokes and Smith Co., Philadelphia, Pa.). U. S. 2,387,812, Oct. 30. A method of making a container from a tube of webbing which comprises puncturing the tube, transversely flattening and sealing the tube on opposite sides of the puncture to form the closed ends of a container, introducing filling into the container after formation of one of its ends, withdrawing air through the puncture from the closed container.

**Means for Filling Liquid Gas Bottles**, R. B. Fannin, Denver, Colo. U. S. 2,387,894, Oct. 30. Means for filling a liquid gas bottle comprising: a supply tank; a vapor receiver; a motor-driven compressor to said tank; an intake conduit from said receiver to said compressor, means for starting said compressor when the pressure in said receiver has risen to a predetermined point.

**Tamperproof Closure**, D. H. Tilson (to Aluminum Co. of America, Pittsburgh, Pa.). U. S. 2,387,955, Oct. 30. A closure combination comprising a sealing member adapted to be pierced readily by a needle, a rupturable outer closure and an apertured reinforcing element.

**Tamperproof Closure**, D. H. Tilson (to Aluminum Co. of America, Pittsburgh, Pa.). U. S. 2,387,956, Oct. 30. A tamperproof package comprising a container having a shouldered finish, a drawn pliable closure re-formed thereon having a lower skirt portion thereof formed as a flange beneath said shoulder.

**Closure for Vessels**, T. R. Casey, Ashland, Ky. U. S. 2,387,978, Oct. 30. A container having air therein; a cover for said container, comprising a body to fit over the mouth of the container, and having a chamber evacuated of air one wall of which chamber is adjacent to the interior

of the container, and means for puncturing said wall after the body is in place on the container.

**Container Holder**, W. O. Demuth (to The Bowerston Shale Co., Bowerston, Ohio). U. S. 2,387,982, Oct. 30. A container holder comprising a plaque of substantial thickness, a recess extending through the plaque, a projection extending from the top of the recess and located between the front and rear faces of the plaque.

**Handling Mechanism for Match Combs and Match Comb Packets**, R. S. Pullen (to Pullenlite Co., Philadelphia, Pa.). U. S. 2,388,011, Oct. 30. In a conveying system for match combs, a storage hopper adapted to contain parts of match combs, having their heads facing oppositely in the pair, a plunger, means for moving the plunger through the bottom of the hopper in direction of the match length to eject pairs of match combs.

**Method of Making Match Packets**, R. S. Pullen (to Pullenlite Co., Philadelphia, Pa.). U. S. 2,388,012, Oct. 30. In the method of making a match packet, the intermediate steps which comprise inserting a spacing strip lengthwise from the head ends of a section of a match comb and in piercing the strip and matches in line therewith at intervals to force the material of one of the parts into the body of the other parts so as temporarily to hold the strip against movement with respect to the match comb section.

**Apparatus for Filling Containers with Liquids, Pastes, or Discrete Material**, D. W. Bingham, Middle Brighton, Victoria, Australia. U. S. 2,388,036, Oct. 30. Apparatus for automatically filling containers with liquids, pastes or discrete material, comprising a supporting frame, a container conveyor carried thereby and movable in a straight line path, an oscillatory feeding head overhanging said conveyor and having a discharge port and control valve.

**Method of Sealing Storage Batteries**, R. A. Daily (to General Motors Corp., Detroit, Mich.). U. S. 2,388,042, Oct. 30. The method of sealing a storage battery having an electrolyte containing chamber and interfilling parts located above the chamber, sealing means for sealing grooves located above the joints, with a sealing material in a volatile solvent.

**Bottle Cap**, V. Guarnaschelli (to Self Seal Bottle Cap Co., Long Island City, N. Y.). U. S. 2,388,050, Oct. 30. A bottle cap for a bottle having an annular bead at its mouth, comprising a member

adapted to cover the mouth of the bottle having a depending peripheral flange extending from the peripheral edge thereof.

**Dispensing Carton**, F. A. Marx (to The Richardson Taylor-Globe Corp., Cincinnati, Ohio). U. S. 2,388,168, Oct. 30. A dispensing carton of flexible sheet material and comprising an outer sleeve and a container portion slidable therein, the container portion consisting of a one-piece blank foldable to provide a body similar in cross-sectional outline to said sleeve, and end walls each formed with lateral flaps held against the body by said sleeve, and provided with dispensing aperture normally covered by said sleeve and exposed by pushing the body outwardly of the sleeve to the required extent.

**Foldable Cardboard Box**, R. F. Smart (to Meade Hyndman, Highland, Ill.). U. S. 2,388,190, Oct. 30. A foldable cardboard box composed of a one-piece cardboard blank including two opposite complementary side walls and two opposite complementary end walls integrally hinged together in endwise series by parallel transverse corner hinges.

**Carton**, E. L. Arneson (to Morris Paper Mills, Chicago, Ill.). U. S. 2,388,243, Nov. 6. A carton which comprises a bottom panel, outer side and end walls extending from the edges thereof, inner side and end walls separated from said outer wall by spacer portions joining said walls at their tops.

**Box**, M. P. Junkin, Drexel Hill, Pa. U. S. 2,388,267, Nov. 6. In combination a box body having adjacent walls forming a corner, said body being formed from fibrous material, and a corner stay formed from a strip of thermoplastic material.

**Fibrous Container**, H. E. McCrery (to Plyfiber Container Corp., Garwood, N. J.). U. S. 2,388,277, Nov. 6. The method of constructing a container body composed of a plurality of superposed plies of fibrous sheet material each having bottom, top and side edges which consists in preforming each of the fibrous sheets into a form in which the side edges thereof are in overlapping surface to surface contacting relation.

**Joinders in Sheet Materials**, W. A. Ringler & M. I. Williamson (to Wedglok Corp., New York, N. Y.). U. S. 2,388,288, Nov. 6. In a carton formed of relatively stiff paperboard, a part having a slit therein, another part having a tongue adapted to be inserted through said slit, said tongue having a folded over part with a free transverse edge thereof serving as a transverse shoulder for abutting engagement with an edge of said slit.

**Apparatus for Producing Stayed Boxes**, M. P. Junkin, Drexel Hill, Pa. U. S. 2,388,266, Nov. 6. Apparatus for securing a thermoplastic stay about a corner of a box body formed from fibrous material.

**Light Sensitive Material Feeding Mechanism**, S. W. Langdon (to Marful Specialties Inc., Rochester, N. Y.). U. S.

## HAVE YOU CHECKED YOUR BOTTLING COSTS RECENTLY?

In these busy times with manpower shortages, it is difficult to control bottling costs. But the successful concerns will be those who start now to plan for "Lower Cost Per Container" production in the days of keen competition that lie ahead.

Bottling machinery that will produce at Lower Cost Per Container is a constant objective at Pneumatic. Proof of this lies in the performance records of the hundreds of Pneumatic machines operating in the field today.

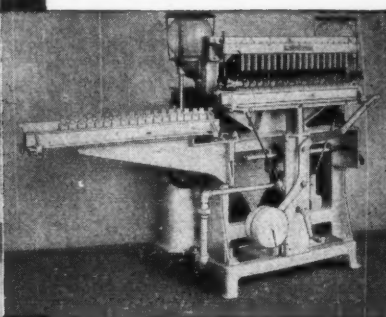
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Less time out for adjustments  
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Longer machine life

All of these add up  
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resulting in "Lower  
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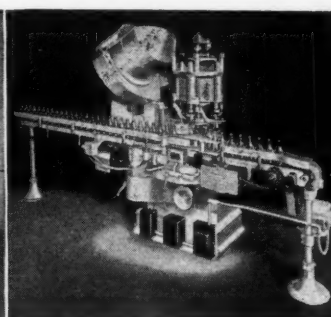
Plan now for the future. Consult Pneumatic and *get the facts* on their complete line of Cleaning, Filling, Capping, and Labeling machinery. PNEUMATIC SCALE CORPORATION, LTD., 69 Newport Avenue, North Quincy 71, Mass. *Branch offices:* New York — San Francisco — Chicago — Los Angeles.



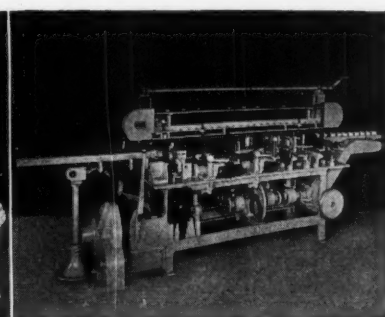
CLEANER



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*One of several machine combinations offered by Pneumatic*

**PNEUMATIC**  
PACKAGING & BOTTLING MACHINERY

2,388,423, Nov. 6. A feeding device for sheet material comprising a support across which the sheet is fed, a carriage having a plane surface on one side of the sheet, a feeding device pivoted to the carriage on the other side of the sheet, said feeding device having a sheet engaging surface and said pivot being eccentric with respect to the said sheet engaging surface.

**Apparatus for Folding, Banding and Mounting Paper Tickets**, R. F. Palmer, Wheeling, W. Va. U. S. 2,388,433, Nov. 6. An apparatus of the character described, including means for folding an end portion of a ticket about itself, intermittently operating rotating means for grasping the folded end of the ticket and conveying the same away from the folding means, and clamping wheel with rotating means for grasping tails of previously folded tickets.

**Cigarette Package Cover**, L. V. Bell, Wakefield, R. I. U. S. 2,388,519, Nov. 6. A cover or lid attachment for a package having an opening in one corner of its wrapping, comprising a mouth frame having opposed side walls and a frontal wall, respectively, for said opening, blades extending from the side walls for insertion through the said opening between the wrapper and the cigarettes packaged therein.

**Sealing Composition**, N. J. Penning, Milwaukee, Wis. U. S. 2,388,568, Nov. 6. A bottle-sealing composition consisting essentially of 25 parts by weight of pale crepe rubber, and approximately 75 parts of rock maple wood flour thoroughly mixed therein.

**Container for Aseptic Filling and Dispensing of Sterile Liquids**, C. M. De Woody (to Ace Glass Inc., Vineland, N. J.). U. S. 2,388,634, Nov. 6. A receptacle having a top provided with a central opening and an off-center opening, a neck extending upwardly from the top and provided with a screw thread, a cap having threaded engagement with said screw thread and provided with a base flange extending over the aforesaid off-center opening.

**Inter-Deck Ladder Apparatus**, N. L. Dahlander (one-half to Robert J. Earl, New Canaan, Conn.). U. S. 2,388,678, Nov. 13. The combination of a frame, a container having a plane rear wall, side walls and an arcuate wall forming a continuous bottom and front wall to form a discharging chute for the container.

**Container Closure**, A. Gudheim (to Lever Bros. Co., Cambridge, Mass.). U. S. 2,388,738, Nov. 13. In combination with a container provided with a neck and a bead projecting outwardly from said neck, means for sealing said container comprising adhesive material located on the upwardly facing surface of said neck of the container.

**Paper Twine and the Method of Producing the Same**, M. Katz, Bronx, N. Y. U. S. 2,388,745, Nov. 13. A cord product comprising a twine body, said

body being composed of fine paper strands twisted together in order to form the said twine.

**Sealing Method**, E. L. Stein, Milwaukee, Wis. U. S. 2,388,770, Nov. 12. A method of sealing edge portions of a work piece having first and second faces by delivering a web of tape having a tacky surface across a pressure foot having first and second faces and by applying a length of said tape about the work-piece margin and adhering it to opposite faces of the work piece.

**Device for Binding**, H. Einzig (to Stemar Displays Co., Chicago, Ill.). U. S. 2,388,960, Nov. 13. A binding device comprising in combination with double sheets adapted to be bound thereby, a body having a slot formed therein receiving said sheets therethrough, and ears on a portion of said body disposed transversely of the slot and arranged outwardly of the same and the body of the device in opposed relation.

**Bottle Closure**, J. F. Millard, Martinsburg, W. Va. U. S. 2,389,072, Nov. 13. A bottle including a neck portion, an internal rib in the neck portion providing a restricted opening in said neck portion and defining an enlarged head having a chamber therein outwardly of the restricted opening, said head tapering toward its outer end and the outer end of the head being oval shaped.

**Counting Device**, E. G. Rice (to Redson-Rice, Chicago, Ill.). U. S. 2,389,107, Nov. 13. A counting mechanism comprising in combination an endless belt, means for supporting the belt and moving it forwardly, means for depositing a series of articles to be counted on the belt in longitudinal alignment thereon.

**Retort for Packaged Food**, D. Bense (to Bense-Brice Corp., Los Angeles, Cal.). U. S. 2,389,117, Nov. 20. An apparatus for sterilizing and preserving food, a multiple package retort comprising an open-ended casing with internal walls in said casing adapted to fit and closely confine a package.

**Carton**, J. E. Walsh (to Self-Locking Carton Co., Chicago, Ill.). U. S. 2,389,222, Nov. 20. An assembled collapsible egg carton, comprising front and rear walls joined by a continuous bottom which extends into a longitudinal partition.

**Carton with Removable Liner**, R. M. Bergstein (to R. M. Bergstein & F. D. Bergstein, trustees, Cincinnati, Ohio). U. S. 2,389,291, Nov. 20. A package comprising an outer paperboard carton and an inner tubular flexible liner, said liner being in adhesive union with said carton.

**Bottle Holder**, S. N. Lebold (to Morris Paper Mills, Chicago, Ill.). U. S. 2,389,318, Nov. 20. A carrier for packaging bottles and the like, comprising a paperboard blank formed into a receptacle having two side walls and two end walls

arranged alternately and hinged to on another at their lateral margins to form a bottle holder.

**Fuse Packing Box**, F. E. Gross, Lonoke, Ark. U. S. 2,389,358, Nov. 20. In a packing receptacle, an outer container including spaced upright side and end walls, and a bottom, a frame member having upright spaced walls adapted to be received in said container with its walls abutting adjacent walls of the said fuse packing container.

**Printing Inks**, J. W. Kroeger and D. J. O'Connor, Jr. (to Fred'k H. Levey Co., Inc., New York, N. Y.). U. S. 2,389,371, Nov. 20. A printing ink comprising a suspension of pigment in a vehicle consisting of a resin dissolved in a liquid polyglycol and a proportion of a liquid selected from the class of liquids consisting of pine oil and mono-terpinyl ethylene glycol ether.

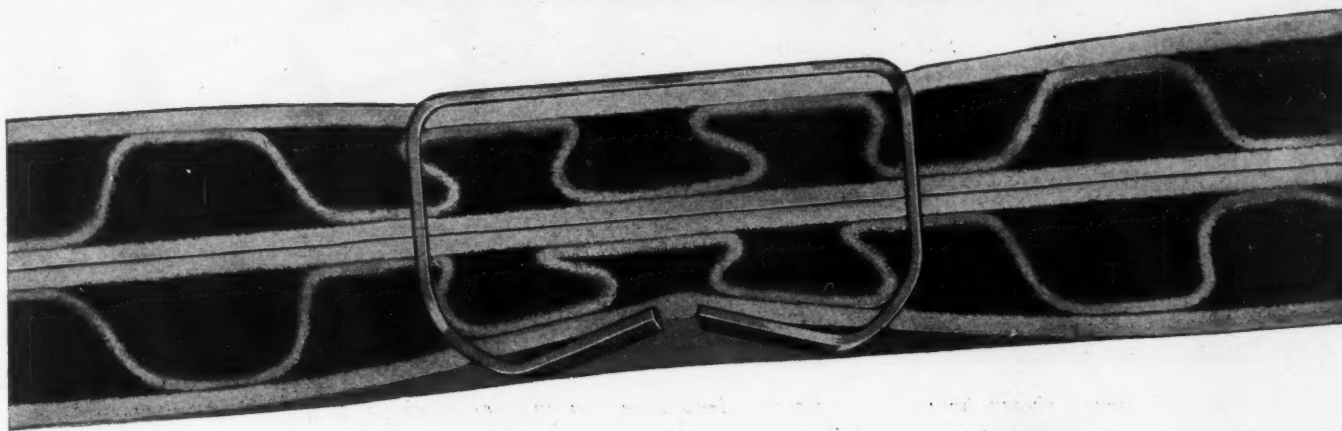
**Combined Protective Enclosure and Support for Infants' Feeding Bottles**, E. E. Silverman, M. Green, and S. Greenspan, U. S. 2,389,390, Nov. 20. A combined enclosure and support comprising an upwardly open lower cover section within which an infant's feeding bottle having a nipple end may be inserted with its nipples end projecting therefrom, and upper cover section affixed to said lower cover section to extend beyond the upper end of the latter, and means for releasably retaining the upper cover in a closed position.

**Closure for Paper Containers**, F. J. O'Brien (to Continental Can Co., New York, N. Y.). U. S. 2,389,534, Nov. 20. In a container, a double-walled body of paper, and an end closure therefor having two deep parallel annular channels separated by a separator wall extending substantially the full depth of said channels and formed by two thicknesses of end closure stock.

**Cylindrical Container and the Like**, W. A. Ringler (to The Gardner-Richardson Co., Middletown, Ohio). U. S. 2,389,547, Nov. 20. A heavy-duty cylindrical container formed of heavy paperboard and comprising a flat-folding body portion which is a blank having an attachment flap articulated at one end and an intermediate score line, together with top and bottom out-turned flange portions articulated by means of longitudinal scores.

**Knockdown Box**, H. C. Skell (to the Hinde & Dauch Paper Co., Sandusky, Ohio). U. S. 2,389,580, Nov. 20. A knockdown box composed of two pieces of relatively stiff paperboard, one of said pieces comprising a bottom panel, front and back wall panels having their bottom edges hingedly connected by fold lines to opposite side edges of the bottom panel, an intumed flap hingedly connected by a fold line to the top edge of the front wall panel, and a top edge lid hingedly connected to the body.

# Save money by **STITCHING** the **MORRISON** Way



**YOU** can save money—and time—in closing your corrugated and solid fibre containers by using Morrison wire stitching machines. These rugged, speedy, heavy-duty stitchers give you neat appearing, strong, pilfer-proof cartons, even when operated by inexperienced help. The machines do all the work . . . cutting, forming, driving and clinching the wire in one instantaneous operation. A cost analysis for closing your cartons will be sent you, without obligation, if you will merely fill in and mail the coupon below.

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Note: We also manufacture a complete line of book, steel, metal and aircraft stitchers. Sales and Service Representatives in all principal cities in the United States and Canada.



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**819 Washington Street, Dayton, F-7, Ohio.**

We use Tape \_\_\_\_\_ Glue \_\_\_\_\_ Tape and Glue \_\_\_\_\_ Staples \_\_\_\_\_  
Average carton size used \_\_\_\_\_ One \_\_\_\_\_ or three \_\_\_\_\_ strips per end  
Number of staples per carton \_\_\_\_\_ Approximate number of cartons per year \_\_\_\_\_

Company \_\_\_\_\_

City and State \_\_\_\_\_

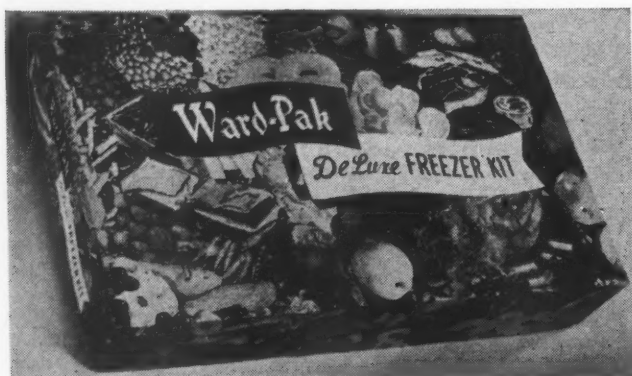
Attention Mr. \_\_\_\_\_





1—The 101 pieces shown here all fit into the decorative box in center, which is printed in silver and blue. There are distinct types of packages for fruits, dry vegetables, ground meats, fowl and meat cuts.

## Locker kits . . . packages to fit the food



2—Color-photo melange lithographed in four colors makes attractive package for the 70-piece set. 3—Envelope for 26-piece set has contents and uses listed on the face.

A Philadelphia manufacturer has recently brought out a new line of packaging kits for home freezer use, based on the sound premise that each group of food products has its own particular requirements for the protection of its freshness, quality and goodness. The packaging materials are themselves attractively packaged, with the idea that the sale of such packaging materials is going to be an important additional activity for the distributors of home freezers and appliances.

There are four major divisions in the packaging of frozen foods and all the freezer kits have been developed to conform with the specific requirements for each.

1. Fruit and berry containers consist of a heat-sealing inner bag and a dry-waxed container. Prevention of water-vapor transmission and oxidation is extremely important in fruit packaging and selection of this type of container was made because of the excellent protection it offers to these products.

2. Dry vegetable boxes for the packaging of such items as peas, lima beans and string beans have been designed to permit easy handling and filling and, at the same time, to offer greatest protection against damage in storage. The type of container used is a wet-waxed folding box, rectangular in shape and easy to close after filling.

3. Ground meat containers are wet waxed on two sides, cubicle in design and top opening. These containers are said to be very easy to fill and offer the necessary protection for the product.

4. Finally, for fowl, meat cuts or fish, wraps and bags made of three different (Continued on page 174)

## TODAY'S Merchandising Trends\*

1. self-service
2. convenience
3. brand emphasis
4. protection
5. informative labeling

\* Based on authoritative surveys of both consumer and retailer preferences.

Packaged products  
are convenient products  
that's the kind the public wants!



Your product must answer the consumer and retailer demand for **CONVENIENCE!**

Convenience that means less spoilage, better display, and easier handling to the retailer . . .

Convenience that offers quick identification, clearer directions for preparation, more compact storage to the consumer . . . In short, a carefully planned and designed package. Consult Milprint today for a package that will spell convenience to the public—and better sales for you!

Printed Cellophane, Pliofilm, Glassine, Aluminum Foil, Vinyl, Lacquer coated and Laminated Papers in all forms, including Sheet Wraps, Rolls, Pouches, or Specialty Bags, Revelation Bread Wraps, Specialty Folding and Window Cartons, Counter Displays, Simplex Pie and Cake Units.

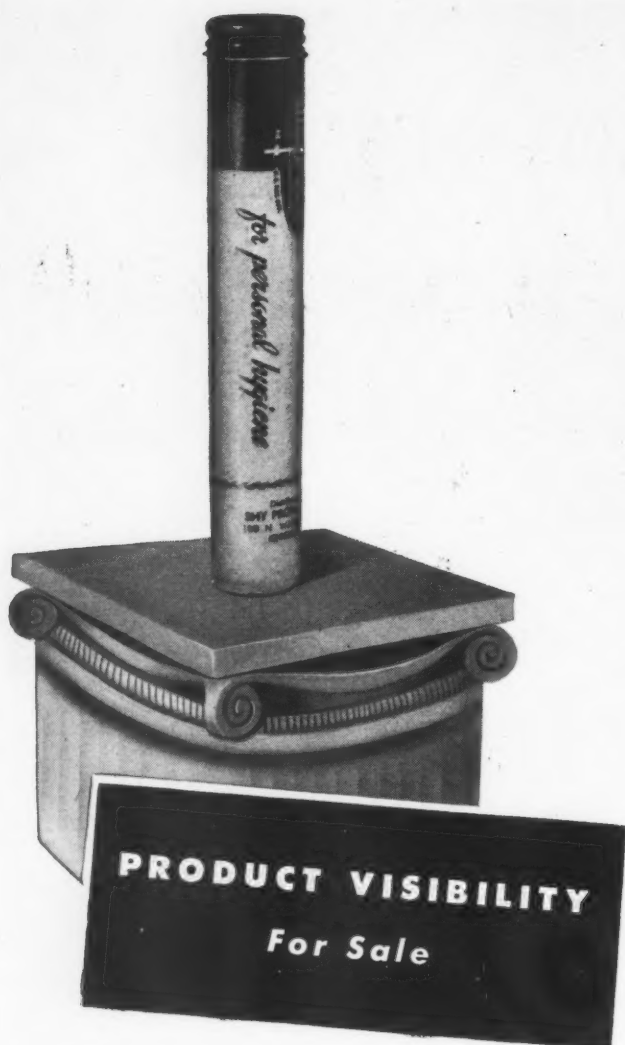
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## Show Off Your Product in LUSTEROID

Why hide your product in packages folks can't see through? Merchandising today calls for packaging that displays as well as protects and there is no better medium for visibility than crystal-clear LUSTEROID vials and tubes.

These modern plastic containers are feather-light, yet strong, rigid and unbreakable. They come in all colors of the rainbow—clear or opaque. There are no labels to affix because Lusteroid is printable. No special packing or partitioning are required. You save money in packing and shipping so that Lusteroid packaging actually pays for itself.

Standard sizes from  $\frac{1}{4}$ " to  $1\frac{1}{4}$ " in diameter and lengths up to 6". Cork, slip-on or screw-cap closures.



Write for full details.

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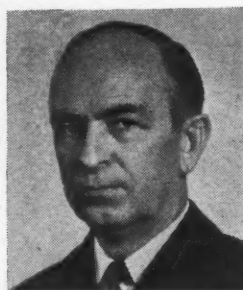
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## Plants and people

(Continued from page 150) tificates of Appreciation to be awarded by the War Dept. Mr. Fowler organized and served as Chief of the Ordnance Packaging Branch from its inception to June 1944. The packaging policy adopted and applied under Mr. Fowler's direction guided all the technical services in the development of a military packaging technology.



W. R. Bennett

Latchford-Marble Glass Co. announces the appointment of **William Robert Bennett** as vice-president in charge of operations. Mr. Bennett, for many years associated with the **Hazel Atlas Glass Co.** as director of operations at the Oakland plant, will have supervision of Latchford-Marble production of glass containers for food, beverages, wines, liquors, chemicals and similar allied products.

**Hummel-Ross Fibre Corp.** announces the addition of the **Container Corp. of America** to the present list of a dozen or more companies licensed on the use of its Sale double-flow box. The Sale double-flow box is a patented device invented by **John W. Sale**, vice-president and general manager of the corporation, for laying a secondary layer of stock on the base web of stock on a Fourdrinier machine. By use of this device, secondary materials can be used either as a top or base sheet.

**Owens-Illinois Glass Co.** announces the appointment of **Robert D. McNaull** as manager of the prescription ware division and **Kenneth A. Hamel** as publicity manager for the glass container division. Mr. McNaull succeeds **Lt. C. J. Kiger**, now serving in the Navy and for whom new duties are planned upon his return to civilian life. **E. J. Walker** will continue as assistant manager under Mr. McNaull. Mr. Hamel was formerly assistant merchandising manager for the company's beverage and dairy container sales division.

**Richard W. Girvin** is now retail sales manager of the cellulosic dept., **International Plastic Corp.**, Morristown, N. J. Mr. Girvin was formerly associated with the **Willmark Research Corp.** and **The Englander Co., Inc.**

Completion of a new folding carton plant of the **Alford Carton Co.**, Ridgefield Park, N. J., is expected about the first of the year. **R. D. Watkins** is associated with the company which is owned by the **Continental Paper Co.** of Ridgefield Park.

**Westfield River Paper Co., Inc.**, of Russell, Mass., acquired ownership of the **Glassine Paper Co.** at West Conshohocken, Pa. With the new facilities, the company will have five machines operating exclusively on glassine and greaseproof papers, making it, according to reports, the third largest factory in the glassine industry.

**Albert H. Charlton** was named sales manager of the aluminum division of the **Reynolds Metals Co.**, with headquarters in Louisville, Ky.

**Reynolds Research Corp.**, a subsidiary of the company, acquired all the Government interests in the Louisville plant operated by it for ordnance during the war. The machinery acquired is adaptable to making spiral-wound paper products of all sorts, ranging from small paper cans, cones and mailing tubes to large waterproof drums with metal ends. Potentially, it is the nation's largest paper can plant.

**Western Package Products Co.**, of Los Angeles, purchased the building and adjoining land at 510 S. Arroyo Pkwy., Pasadena,

# OUR BUSINESS IS PACKAGING

TODAY the packaging business is recognized by top executives and merchandising experts as a highly specialized service and a strong merchandising device. New media, new techniques, new styles and merchandising ideas are demanded of packaging—making it a job for qualified specialists. Packages prepared by Rowe are based on the four cornerstones of packaging—product protection, sales appeal, consumer utility and cost limitation. May we call and talk over your packaging problems with you?

**ROWE PACKAGING**

CO., LIMITED

TORONTO • ONTARIO

*A Complete Packaging Service*

... WHY  
DESIGNERS  
ARE USING

**RAYCO**

**Flock**

RAYCO FLOCK gives the sales appeal of a de luxe package, at low cost. In a multitude of beautiful colors, flock imparts the texture of

**SUEDE • VELVET • VELOUR**

to ordinary paper, cardboard, metal, wood, glass, etc. Composed of finely cut textile fibres, flock is applied direct to containers, or by covering them with flocked papers, cloth, card, etc. Type or designs can be printed on flocked surfaces.

### FLOCK COATED LOTION FLASK

By applying Rayco Flock direct to the flask, in Brown, Gold, Rust and "Kasha" colors, a distinctive suede leather effect (also non-slip) is achieved for "Monogram Initialed After-Shave Lotion," product of L. & K. Laboratories & Co. of St. Paul, Minnesota.



*Request samples and prices*

**RAYON PROCESSING CO.** of R.I. INC.

110 TREMONT ST., CENTRAL FALLS, RHODE ISLAND

*Developers and Manufacturers  
of Printing and Coating Flock*

Cal. This property formerly belonged to **Shellmar Products Corp.**, whose coast operations have been consolidated in South Gate, Cal. Acquisition of the building will permit the company to expand its activities to the flexible packaging field.

**The Lynch Corp.**, Anderson, Ind., announce the formation of a new wholly owned subsidiary, **Lynch Package Machinery Corp.**, Toledo, O. The new company was formed to consolidate in one plant the diverse package machinery operations of the **Wrap-O-Matic** and **Morpac** divisions of the **Lynch Mfg. Corp.** of Defiance and Toledo, and the **Toledo General Mfg. Co.**

**Dr. Ernest B. Bengert**, general assistant manager of the technical division of the rayon department of **Du Pont Co.**, is now manager of the division. Dr. Bengert succeeds **M. du Pont Lee**, who becomes general consultant in the engineering department.

**A. Fleisig Sons Folding & Set Up Paper Box Co.**, New York, recently acquired a 5-story building at 30-36 Crosby St. to enlarge its production facilities and a showroom and office building at 472 Broadway. The company intends moving into the new quarters Feb. 1.

**Union Bag and Paper Corp.**'s Savannah, Ga. plant, largest integrated pulp and paper mill and bag factory in the world, recently completed the manufacture of 2,000,000 tons of kraft paperboard, enough to cover 7,500 sq. mi. Most of Union's kraft is converted by the company into an average of 25,000,000 paper bags daily.

With the dissolution of the **Leeds Sher Co.**, the **Charles S. Sher Co.** will operate from 140 W. Broadway, New York, as distributors of paper, twine and kindred products, and the **Leeds Sales Co., Inc.**, Specialty Package Division, at 34 W. 34 St., New York, will handle the design, development and fabrication of functional and merchandise packaging, including cellophane, metal foils, plastic films, set-up and folding boxes, corrugated containers and painted and die-cut specialties.

**Lt. Alan Fisk**, U.S.N.R., owner of the **Alfa Display Co.**, New York, recently released to inactive duty, has reopened offices at 110 E. 42nd St.

**Acme Steel Co.** recently completed a new modern building addition to its warehouse at its Pacific Coast division headquarters 4903 Pacific Blvd., Los Angeles.

**W. E. Blauvelt**, formerly with the WPB Equipment Division, joined **V. & E. Kohnstamm, Inc.**, as head of the bottlers' and brewers' export equipment and materials department. Mr. Blauvelt, for many years vice-president of the **Edward Ermold Co.**, was president and a charter member of the **New York and New Jersey Bottlers' Service Club**.

**The Thatcher Mfg. Co.**, makers of glass containers, announces the following personnel changes: **John B. Miller** as New England district manager, with offices in Boston; **George A. Mellor** as assistant to **David R. Parfitt**, vice-president in charge of sales; **Joseph L. Stanley** to handle milk and general line accounts at the Philadelphia office; and **Howard Blair** to handle milk accounts at the Rochester office.

This month the **Multistamp Co., Inc.**, of Norfolk, Va., marks its 25th year as a maker of stencil duplicators and supplies.

**Robert H. Evans**, formerly chief of WPB's Pulp Allocation Office, is now executive assistant to the management of the **Riegel Paper Corp.** and the **Riegel Textile Corp.**

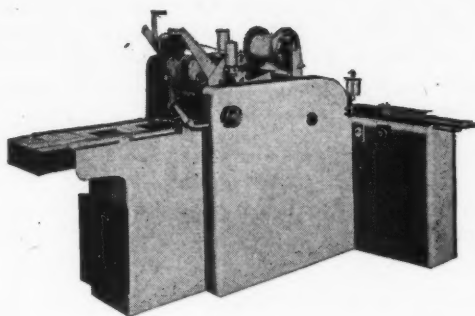
**Robert M. Noeldechen** has been appointed director of sales for the **Columbia Can Co.**, Long Island City, N. Y., manufacturers of cans and metal specialties, plain or lithographed.

**Miller Printing Machinery Co.**, of Pittsburgh, is now a full subsidiary of the **Commercial Credit Co.**, of Baltimore, which

for  
**Moisture-proof  
PROTECTION**

## **CELLO-WRAPPS** with or without Tear-Strips **AT 250 or more PER MINUTE.**

The *basic* SCANDIA patents are your complete assurance that Scandia cello-wrapping units are economical, *FAST* and dependable. Watch a Scandia wrapping machine work, and you'll be convinced that one of the Standard Scandia units gives you unequalled value . . .



Scandia Fully Automatic Cello-wrapping machine equipped with electric eye for registering printed wraps, and tear-tape attachment.

with *Electric Eye Attachment*

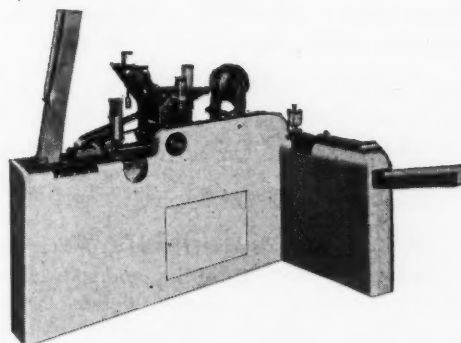
with *Revenue Stamp and Tear-Tape Attachment*

**SAVE TIME AND MONEY**

**WITH A STANDARD SCANDIA\***

Use Scandia cello-wrap units for ANY products that must be protected against *moisture*; or against the *loss* of moisture. Widely used in drug, tobacco, bakery and candy field; also for protection of razor blades, etc.

\*Manufactured under Bronander Patents.



Scandia Special Fully Automatic Cello-wrapping machine equipped for applying Revenue or Union Stamps and Tear-Tape.

*Ask for Complete Details —*

# **Scandia MANUFACTURING CO.**

**NORTH ARLINGTON**

**NEW JERSEY**

IN A STEW  
over a  
Production Tag  
problem?



PUT IT UP TO  
Dennison  
and Relax!



**P**ROPERLY planned and integrated tags can do a lot to help you get back to top production on peacetime lines. If your present system is keeping you in hot water, why not decide right now to put the problem up to Dennison.

Dennison has been studying this subject for years. During this time we have helped develop modern, smooth-functioning tag systems for practically every industry and type of manufacturing operation. So don't hesitate to send us your problem because you feel it is "different."

Whether you are primarily interested in better tags for raw materials control—production routing and scheduling—inspection—shipping records or other phases of your plant operations, Dennison can offer you practical suggestions.

Remember, too, that you do not have to pay a premium price for experience and know-how when you put your problems up to

**Dennison**

SPECIALISTS IN PAPER PRODUCTS FOR OVER A CENTURY



Many Dennison-developed production tags are for hand endorsing. Others are imprinted with variable code information by our Dial-Set Printer. For further information write Dennison Manufacturing Company, 1227 Ford Ave., Framingham, Mass.

TAGS • LABELS • SEALS • SET-UP BOXES • MARKING SYSTEMS • PAPER SPECIALTIES

164 MODERN PACKAGING

has long been a substantial holder of the company's stock. The management of the Miller Co. will continue in the hands of W. G. Montgomery and his son, Gordon Montgomery, and the amalgamation will make possible still further expansion of the company's postwar plans.

L. H. Merrill was appointed general manager of the newly created Dairy Products Containers division of Frank D. Palmer, Inc., Chicago. The new division of the Palmer organization will serve the dairy industry with the company's equipment and paper packages for fluid milk and other dairy products. Mr. Merrill has long been associated with the dairy industry on the Pacific Coast.

Ball Brothers Co., of Muncie, Ind., has acquired a 30-acre tract of land at El Monte, Cal., where a plant will be erected for the production of glass containers and closures.

The Joe Salwen Paper Co., mill agents and distributors of paper, board and twine, will occupy its new premises at 243-249 West 67th St., New York, on Feb. 1.

The Thames River Division of the Robert Gair Co., Inc., at New London, Conn., was awarded a certificate for meritorious service by the Quartermaster Dept. of the Army Service Forces.

A. B. Massa Paper Corp., paperboard specialists, announces the appointment of Harry A. Westwood as assistant to the president. Mr. Westwood, for many years associated with United Paperboard Co., Inc., was recently released from service with the WPB Container Division.

United Paperboard Co. announces the appointment of John J. Fritz as its Chicago sales representative. Mr. Fritz, for many years associated with the paperboard and packaging industry, will make his headquarters at 234 Engineers Building, Chicago.

Announcement is made by the Chase Bag Co. of the appointment of A. A. Glatz as sales manager of the company's Chicago sales office and Milwaukee branch.

National Can Corp. announces the election of B. Delacour Beamish, formerly administrative vice-president, as president, director and member of the executive committee. The company also announces the addition of Arthur G. Hopkins, vice-president, to the board of directors.

United Merchants and Mfgs., Inc., and Freyberg Bros.-Strauss, Inc., have formed a new company for the manufacture of ribbons and narrow fabrics. Management will be under the current personnel of the Freyberg Bros.-Strauss Inc. organization.

F. J. Stokes Machine Co., of Philadelphia, Pa., announces the appointment of Williams & Wilson, Ltd., with offices in Montreal, Toronto and Windsor, as its exclusive sales representative throughout Canada, east of Manitoba. Harold G. Roman has been promoted to now New England sales representative for the company.

H. W. Johnson, formerly of the Robert Gair Co. and more recently with OPA, joined the Wyomissing Glazed Paper Co., Reading, Pa., as head of its New York office which handles distribution for the company in the metropolitan district and the New England states.

Herbert L. Enzelberger, sales manager of the food container division of Owens-Illinois Glass Co., died of a fracture skull sustained in an automobile accident on Nov. 3. He was 49 years old and had been in the glass industry 32 years.

Arthur H. Kroeck, vice-president of the National Paper Box Mfgs. Assn., died on November 23.

# FUNCTIONAL PACKAGING MATERIALS

DECORATED  
AND  
PROCESSED

PAPERS-FOILS-FILMS AND  
TEXTILES

IMPREGNATING  
LAMINATING  
EMBOSSING  
PRINTING  
COATING

Our complete facilities for laminating, coating and decorating are available to help you meet any special packaging problem. Any material or combination of materials listed above can be utilized to do a specific job. The right functional packaging material for proper protection plus the right design for eye appeal will help to stimulate the sales of your product. We would welcome an opportunity to discuss your packaging problems. We are ready to serve you. May we have your permission?

**Converter**  
CORPORATION

CLINTON, MASSACHUSETTS



JANUARY • 1946

165

**24  
YEARS  
of KNOW-HOW**

Specializing  
in  
**PRECISION**

*Compression  
and  
Injection  
Molding*

also  
**HIGH PRESSURE  
DIE CASTING of  
ZINC and ALUMINUM**



**PLASTIC & DIE CAST  
PRODUCTS CORP.**

Roy L. Peat, President • Established 1920

1010 EAST 62ND STREET  
LOS ANGELES 1, CALIFORNIA

## Air hammer stripping



Representatives of paper box machinery manufacturing firms recently witnessed a special showing of a sound motion picture on the air hammer stripping of waste from around carton blanks in Chicago, prepared under the supervision of the Development Committee, Folding Paper Box Assn. of America.

Such air hammer stripping is predicated on the perfect stacking of the sheets at the delivery end of the cutting and creasing press. To insure such alignment, the printed sheets are "locked" together by hand at the delivery end of the press.

As demonstrated in the film, the full benefits of air hammer stripping depend largely on minor redesign of the box style, possible alteration of the die to facilitate removal of otherwise inaccessible pieces of waste, and careful attention to the sheet layout, with the elimination of the knife at the gripper edge of the sheet in some instances.

In the preparation of the die, a minimum number of nicks may be added to insure proper delivery of the sheet on the cutting and creasing press.

Tests with the air hammer stripping technique indicate that virtually all types of work may be stripped in this manner, from a small number of boxes on a sheet up to a large number.

Benefits of air hammer stripping include reduction of physical exertion and fatigue; saving in floor space; balance with cutting and creasing department; better gluing production; considerably less plant congestion; more rapid training of operators; much cleaner work and less dust.

*There is an increasing demand for well-qualified speakers to carry the story of packaging to technical, business and consumer organizations. The Speakers Bureau of MODERN PACKAGING stands ready to help you in your search for such a speaker.*

# NOW YOU TOO—CAN MAKE YOUR OWN PAPER!

SIMPLY GET A NICE SPRUCE LOG AND CHOP IT INTO TINY CHIPS,



GET YOUR WIFE'S BEST BOILER,



FILL IT WITH WATER, THROW IN 2 HANDFULS OF

CHIPS. (THE REST OF THE CHIPS WILL TASTE WELL WITH



CREAM, SUGAR

AND BICARBONATE OF SODA.) NOW SIMPLY BOIL THIS MESS ALL DAY LONG



AND AT NITE DRAIN OFF THE WATER, AND PUT THE GOO THROUGH THE MEAT

GRINDER



KEEP THIS UP ALL NIGHT. NEXT DAY, BACK IN THE BOILER,

NEXT NIGHT, THE OLD MEAT GRINDER, AND



KEEP THIS UP

NIGHT AND DAY, DAY AND NIGHT, UNTIL THE G.O.P. GETS BACK

IN WASHINGTON. WHEN THAT TIME COMES SIMPLY CUT THE



TAIL OFF YOUR SHIRT, TACK IT OVER YOUR MOTHER-IN-LAW'S PICTURE

FRAME,



(BETTER LOVINGLY REMOVE THE PICTURE FIRST) AND—

SIMPLY POUR YOUR STEW THRU THE SHIRT



TAIL. THE

FIBRES WILL SNUGGLE DOWN ON THE CLOTH AND THE WATER IS

SUPPOSED TO DRAIN OFF. NOW IF YOU HAVE FOLLOWED DIRECTIONS

AND YOU CAN GET THE PULP FIBRES OFF THE CLOTH IN ONE PIECE

YOU HAVE SIMPLY MADE YOUR OWN PAPER



AT SIMPLY

NO COST!  ONE MOMENT PLEASE—

YOU MIGHT MAKE OUT A LITTLE BETTER IF YOU SENT AN ORDER TO

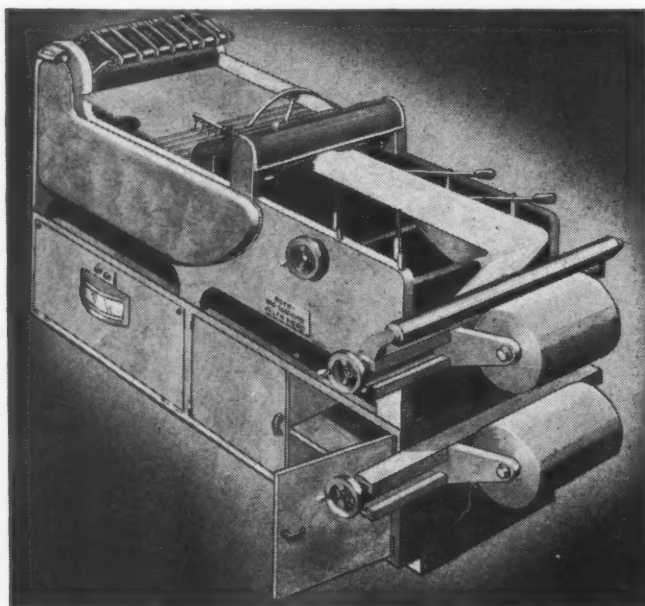
**MATTHIAS PAPER CORPORATION**  
165 WEST BERKS STREET • PHILADELPHIA 22, PA.

WHO HAVE BEEN IN BUSINESS FOR ALMOST 50 YEARS  
AND CLAIM TO HAVE EVERYTHING.

# ROTO BAG MACHINE

*handles*

CELLOPHANE • DIAPHANE • MARALUX  
or any heat-seal coated paper  
FLAT - SQUARE BAGS



HEAT  
ELECTRONICALLY CONTROLLED

PRECISE CONTROL PROVED BY THE USE OF  
WHEELCO ELECTRONIC PRINCIPLE PYROMETER

READY FOR IMMEDIATE DELIVERY

## ALLEN-MEAD

P. H. Diffenbaugh  
Direct Factory Representative  
55 E. Washington St.  
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Phone: State 1100

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222 So. San Pedro St.  
Los Angeles, Calif.  
Phone: TU 7649

DESIGNERS AND BUILDERS OF SPECIAL EQUIPMENT

## Packaged Press Party

A clever new job of packaging that may give you an idea the next time you are looking for publicity about new products, was introduced by Electronic Corp. of America when they boxed a "Press Party" for tired editors.

The box, suitably identified with company name and trademark, contained press releases and photos describing six new radio sets—plus three drinks in miniature bottles, glasses, peanuts and pretzels. The interior of the box was fitted with die-cut platforms to hold all the items in place. More than 300 "packaged press parties" were delivered by messenger in New York and by express to other parts of the country. Cost was much less than a usual hotel party for this number of people, according to the company, and the results in clippings, letters from editors, wires, telephone calls, good will were enough to make other publicity agents green with envy.

The idea is attributed to Phillip Barber, Robbins and Barber, public relations council for ECA. An advertising display company arranged for the details of box construction and the public relations group assembled the press releases and photos in the boxes to suit the requirements of different types of publications, dealers, etc. ECA is planning to send out another 300 of the "packaged press parties."

*Pictures and releases accompanied the "fixings" for this press party which could be enjoyed by the editor without leaving his desk. The 300 sent out drew phenomenal number of phone calls, wires, letters from all over.*



*Let's meet  
at the National Cannery Convention*

*February 4<sup>th</sup> to 8<sup>th</sup>*

The stage is set. You are cordially invited to visit our Duraglas container exhibit to see the premiere of the new film, "MRS. AMERICA SPEAKS," a 25-minute sound and color picture revealing what Mrs. America wants in a modern grocery store. We believe it is a picture you will not want to miss. Added attraction will be the color film, "GLASSING IN DURAGLAS CONTAINERS," illustrating up-to-date glass packaging practices.

You are invited to make use of our Conference Rooms for your organization or to meet your brokers and distributors. You are welcome to leave your coat and hat while you visit other exhibits.

At our exhibit you will find assembled for your inspection up-to-date displays of glassed products and factual material concerning them—displays of interest to packers, brokers, wholesalers and retailers because they reflect the preferences of your ultimate customer and consumer—"Mrs. America."

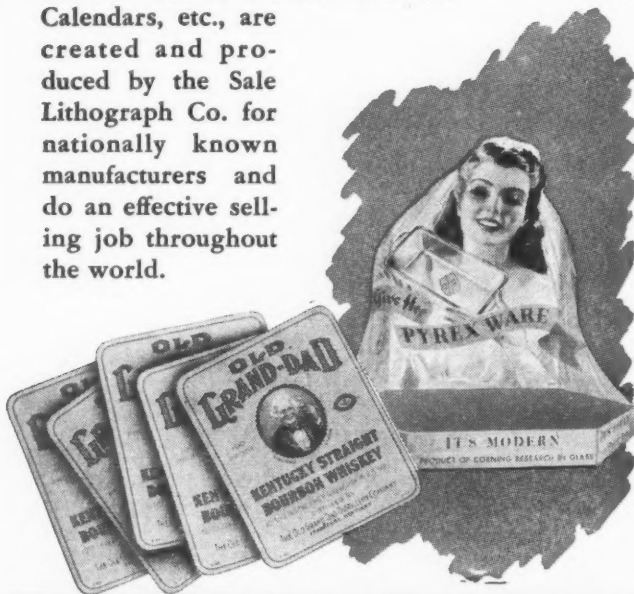
*Owens-Illinois Glass Company  
Toledo 1, Ohio*



## **BUT... ALONG WITH "KNOW HOW" SHOULD GO THE HABIT OF STRIVING FOR PERFECTION—EVEN IN THE SEEMINGLY UNIMPORTANT SMALL DETAILS.**

This habit is deeply rooted in the craftsmen and specialists banded together in the Sale Lithograph Company. Infinite care is given to every detail in the production of your displays, labels, wraps, advertising folders or whatever your lithographic needs may be. Skilled hands and eyes make certain that perfection in every detail will ultimately result in a package or advertising piece you will be proud of.

Displays, Cut-outs, Box Wrappers, Labels, Folders, Inserts, Booklets, Calendars, etc., are created and produced by the Sale Lithograph Co. for nationally known manufacturers and do an effective selling job throughout the world.



### *Color Lithographers*

Since 1904 Devoted to the Production of Fine Lithography

## **Glued unit loads . . .**

(Continued from page 120) load is based on the fact that the load is formed into a unit or series of units which move as a unit on impact. The fact that the load is tightly in contact with the side walls, as well as with the floor of the car, developing a friction drag, permits the dissipation of all impacts caused in transit. Previously, every effort was made to anchor the load firmly, thus forcing each case to absorb the full impact. The new method of glued loading is resulting in consistent delivery of cars without breakage, or with such small amounts of breakage that it may be attributed to other causes.

Buckling and saw-toothing have not occurred on glued loads. Anchored gates and bracing are not required. Should end-shift develop, cases cannot break loose and fall into the void. Previously, this was a major cause of excessive breakage.

While better quality fibreboard shipping cases are now available, pre-war quality will not be fully restored for about another year. The eventual return of pre-war conditions, with the availability of high standard containers, leads to the conclusion that the principle of unitizing the load by strip gluing is of such great value as to warrant its adoption as a permanent arrangement.

CREDIT: Adhesive, "Load-Lok" by Adhesives Division, National Starch Products, Inc., New York.

## **Textile labels . . .**

(Continued from page 107) with such information to take home with her purchase.

Essential information that should be on these labels should include every detail under the following points:

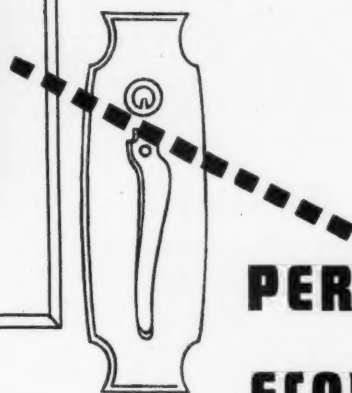
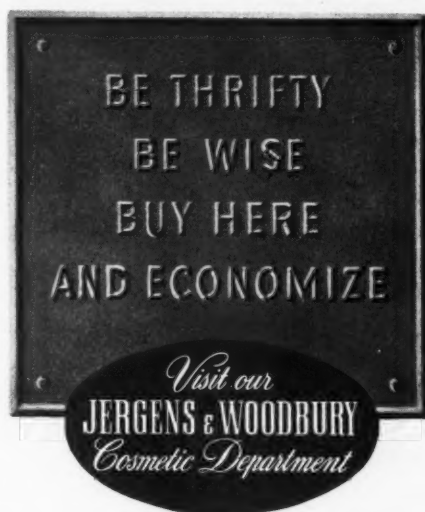
1. What the product will do
2. What the product is made of
3. How to use it
4. How to take care of it

If women had had such information in the beginning about rayon there would have been much less dissatisfaction with the early synthetic fabrics. Manufacturers had learned this lesson by the time the war forced rayon stockings on the public. Perhaps no better educational job was done than the labeling and accompanying educational campaign which told women not to wear rayon hose when wet and described how long to allow them to dry in actual specified number of hours.

During the war some synthetic materials were used as substitutes; sometimes they were misused in places where they did not give good performance. This does not mean that they are not good if used for purposes for which their properties qualify them. But performance information, whatever it is, must be given to

# PALM

## BROTHERS *Decals*

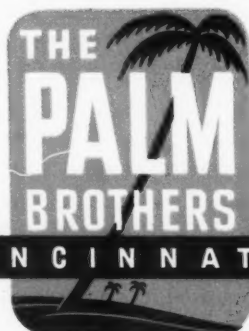


**PERMANENT  
ECONOMICAL  
EASY TO APPLY**

Leading Industries everywhere focus consumer attention to their products and sales outlets with Palm Brothers Decals.

See for yourself why a product marked with a Palm Brothers Decal is a product marked for success!

Samples submitted without obligation.



*Decalcomania Co.*

CINCINNATI...12...OHIO...U.S.A.

Write today  
for illustrated  
bulletin.



**YOUR MARKER of TOMORROW IS HERE TODAY**

Marks on Everything Wet or Dry

*A Stroke and It's Dry*

★ **FOR STOCKROOM SHIPPING PRODUCTION**

★ Literature on Request

★ Handy non-breakable, non-inflammable.

★ Only 3 parts, can't get out of order.

★ Instantly interchangeable, precision fitted nibs. No tools required.

★ Marks at a touch. Speeds work. Eliminates fatigue.

★ Quick, clean, always ready to use.

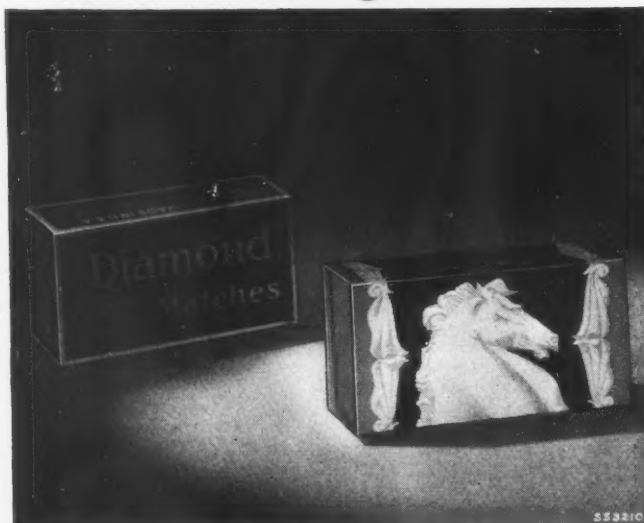
★ Unconditionally guaranteed for mechanical perfection.

**Floquil**  
Reg. U.S. Pat. Off.  
**FOUNTAIN MARKER**  
Distributors in Principal Cities

Mrs. of Floquil  
Marking Colors and  
Marking Devices

**FLOQUIL PRODUCTS, INC. • DEPT. P • 1993 Broadway • New York 23**

## Good Package Design



### IMPORTANT TO MERCHANDISING AND TURN-OVER



Attractive packaging makes merchandise desirable. . . . It is the silent salesman of your product on retailers' shelves.

Recognized for their contribution to outstanding design in modern packaging, the ability and experience of the WLS staff of artisans are at your service.

Interview with Principals • No Obligation

36 Pages . . . 420 Pictures . . . an Exhibit of Performance  
Write for a copy of it Today on your business letterhead

AMERICA'S LARGEST ORGANIZATION SPECIALIZING IN MERCHANDISE PRESENTATION

**W. L. STENSGAARD AND ASSOCIATES, INC.**  
346 N. JUSTINE ST. CHICAGO 7, ILLINOIS



the consumer. If the manufacturer of a product has tested his product and has the opportunity to stand back of it by putting his name on the label at the point of sale, the chances of consumer satisfaction are greater. The maker is going to stand back of his product and make it good. If he doesn't he might as well fold up shop.

Now, when the new synthetic materials and finishes are just entering civilian markets, is the time to study the labeling problem and to present the information correctly from the start, to coordinate labeling presentation and distribution. The manufacturers in the synthetic field who are doing that now, are the ones who will have a long road of successful acceptance ahead—but they need the cooperation of the retailer.

**ACKNOWLEDGMENT:** In addition to the manufacturers of synthetic textiles who supplied their own labels, acknowledgment to Cameo Die & Label Co., Robinson Tag & Label Co. and Ever Ready Label Corp. for illustrative material with this article.

## Freezer packages . . .

(Continued from page 132) that a return to cans is expected for fruits.

Among the fruit freezers, 64% said they expect to use tin for packing their products in this size-group, 11% will use both tin and fibre and 25% will turn to fibre exclusively.

In the vegetable line, 88% plan to utilize fibre, 4% want both tin and fibre and 8% are counting on cans.

Packs over 50 lbs. were purposely excluded from this study, because to date the wooden barrel has been the only commercially important container and obviously would have been specified by all packers.

How these postwar plans compare with wartime practices is shown by the accompanying table, which breaks down the 1942-44 packs into the various sizes and types of containers.

The wooden barrel has continued to handle a large share of the fruit pack during the war years. It packaged 45% of the 1941 output, 37% of that of 1942, 44% in 1943 and 32% in 1944.

The tin can, once also a major frozen fruit container, dropped off badly in recent seasons, a wartime casualty. Its percentage of the total output was 30% in 1941, 45% in 1942, only 8% in 1943 and 9% in 1944.

The fibre package, on the other hand, has grown rapidly during the war period. The U. S. used it for only 25% of the 1941 frozen fruit pack, and only 18% of the 1942 output. But in 1943 the percentage rose to 48%, and in 1944 it hit 59%.

In addition, fibre has been used almost exclusively for frozen vegetable packs. When these items are added to the frozen fruit tonnage, the importance of the fibre container in the picture during the war becomes even greater.

In 1941, just under 50% of the combined frozen fruit and vegetable production of the country went into fibre. In 1942 it was 53%, in 1943, 74%, in 1944, 76%.



# GUMMING IS OUR BUSINESS



That's Right! We're manufacturers of *On-to-Sta* Gummed Tapes and Specialties that are made to stay on. Assure yourself of efficient shipping operation and extra protection. . . .

GUMMED SISAL TAPE ■ HEAVY GUMMED KRAFT ■ GUMMED CAMBRICS \* ■ GUMMED SEALING TAPE, PLAIN & PRINTED \* ■ "CARPAC" REINFORCED SEALING TAPE ■ ASPHALT LAMINATED WATERPROOF PAPERS, REINFORCED AND DUPLEXED ■ VENEER GUMMED TAPE ■ GUMMED HOLLANDS \* ■ "SOLSEAL" WATERPROOF TAPE ■ CREASED GUMMED STAY \* ■ COMBINING

\* SAMPLE BOOKLETS UPON REQUEST

SELECT YOUR GUMMED TAPES AND SPECIALTIES FROM OUR COMPLETE LINE

## ATLANTIC GUMMED PAPER CORP.

MANUFACTURERS OF "On-to-Sta" GUMMED PAPERS  
PLANT & MAIN OFFICE: ONE MAIN ST., BROOKLYN 1, N. Y.

BRANCH OFFICES: PHILADELPHIA • PITTSBURGH • CHICAGO • BUFFALO • BOSTON • ATLANTA • LOS ANGELES • HAVANA

## OUR WAR-TIME SERVICE RECORD

# 80%

of Orders Received  
Shipped by Next Day

WILLIAMSON ADHESIVES, INC.

Our 32nd Year

2372 West 18th St. Chicago 8, Illinois

*We do not believe there is any substitute for quality*

## WELL DISPLAYED IS HALF SOLD!



WEINMAN  
VISI-BOXES  
AND COUNTER  
DISPLAYS

MADE OF  
TRANSPARENT  
ACETATE

### VISI-BOXES

Show your product while protecting it. Made of transparent acetate, a crystal-clear sheet plastic. Odorless non-inflammable. Will never crack or tear. Ideal for merchandising candy, cookies, fruit-cake, nuts, toiletries, novelties, seed, small hardware specialties and scores of other products.

Transparent Jumble Baskets for counter use. Send your specifications for free sample and quotation.

Some territory open for experienced packaging salesmen.



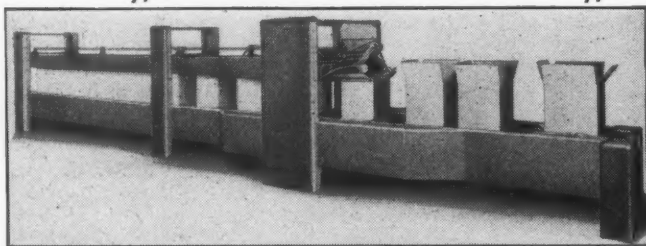
WEINMAN BROTHERS, Mfrs.

Transparent Box Headquarters

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CHICAGO 10, ILL.

## Designed for Efficient Packaging



### ABC Automatic Top and Bottom CASE SEALER

Modern, streamlined design . . . requires no operator. Seals 30 cases per minute . . . both top and bottom, top only or bottom only. Fingertip control. Extra-rigid construction. Adjustable to 6"-18" width, 8"-30" length, 3"-28" height.



#### Special Engineering Service

Packaging machines correctly designed and constructed to fit your own special requirements.

**ABC PACKAGING MACHINE CO.**  
QUINCY, ILLINOIS



DECORATORS  
ON GLASS  
AND PLASTIC  
CONTAINERS  
SINCE 1936

★  
4 COLORS  
IN 1 OPERATION  
—FINEST DETAIL

*Anigraphic  
Process, Inc.*  
11 BROADWAY, NEW YORK 4, N.Y. • WHITEHALL 3-5253

## Locker kits . . .

(Continued from page 158) types of materials are included in the kit. The first is a bleached kraft, coated on one side with a modified micro-crystalline wax. This gives excellent protection against water-vapor transmission and is in the medium price field. The second is a transparent cellophane in #300 and #450 MST gauges. When this is used in conjunction with a stockinette, it gives outstanding protection to the product. The third, a plain or laminated aluminum foil, offers frozen foods the highest amount of protection obtainable in flexible packaging. The water-vapor transmission of this material approximates zero grams, and it is a highly effective barrier against oxidation.

The kits are made up in three different sizes to accommodate varying home freezing requirements and are designed to retail at \$1.25, \$4.50 and \$6.50. The kits differ primarily in quantity of materials offered.

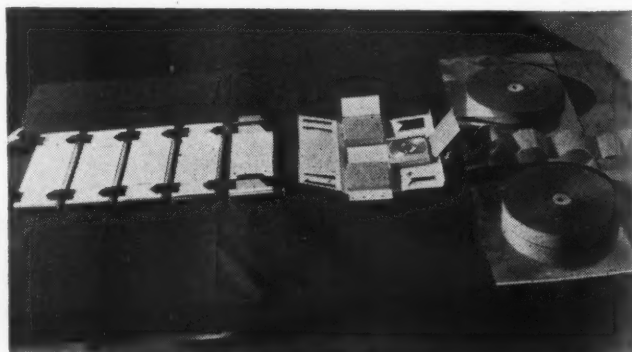
CREDITS: Kits, D. L. Ward Co., Philadelphia. Designs for kit boxes, McLain Organization, Philadelphia: lithography Kellerlinus Lithographic Mfg. Co., Philadelphia. Kit boxes and freezer wrap, Paper & Corrugated Specialties Co., Philadelphia. Paperboard frozen food packages, Container Corp. of America, Chicago.

## Packages confound enemy radar

One of the intricate war packaging jobs, secret until now, is the ingenious method devised by Standard Rolling Mills, Inc., Brooklyn, for dispensing from planes millions of pounds of "confetti"—aluminum foil cut in tiny strips—to confound enemy radar operators.

Some of these foil strips were as small as 1-in. in length and less than 1/16-in. in width. The contract called for several million packages—50 freight carloads—a month. The problem was to design a light, strong, rapid-opening, positive-operating, easily constructed, small package.

The machine gun ammunition belt provided the inspiration. Packages, unsealed, were laid side-by-side on a specially designed machine with two strips of laminated paper and cloth tape laid across them near the ends. The strips ran for as many as 244 packages. The machine applied the tapes to the slots in the package so that when the pack was ejected from the dispenser, the tape was ripped off, opening the package and scattering the contents.



# MODEL **JK**

*2 Station Automatic*  
VOLUME FILLER  
VOLUME PACKER  
GROSS WEIGHER



*... for all types of powdered, and granular materials*

The Model JK is an Automatic Packer that will also operate as a Volume Filler or Gross Weigher. This machine fulfills every requirement for advanced means of automatically handling powdered, granular and paste materials of almost all descriptions.

The Model JK has two filling stations. When the machine is used as an Automatic Volume Packer the empty containers are elevated, causing the actual filling to take place under the amount of controlled pressure suitable for the type of material and the size of container into which it has to be packed. This same principle is used when the machine is equipped as a Packer-Weigher, except that the main portion of the contents is packed under pressure, the remainder finished by weighing for accuracy. When the

machine is used as a Volume Filler or Gross Weigher, provision can be made to incorporate a vibrating type of settling device to settle the material after filling.

The machine can be equipped for intermittent conveyor motion to facilitate handling of oval or irregularly shaped containers. With this intermittent motion, the conveyor moves just enough to deliver one container at the transfer station, thus preventing climbing and piling up of the containers.

The many new automatic features, plus the speed and accuracy of the JK, soon pay for the machine through savings on labor costs alone. It will pay to get full details and specifications — there are many features never available before — write today for bulletin which gives complete data on the Model JK!



Filled automatically on the JK at the rate of 60 per minute.



Send U.S. details on any of your packaging problems — we have the machines and the engineering background to help solve them.

**U.S. Automatic Box Machinery Co. Inc.**

Owning and Operating

NATIONAL PACKAGING MACHINERY CO. • CARTONING MACHINERY CORP.

18 ARBORETUM ROAD, ROSLINDALE, BOSTON 31, MASS.

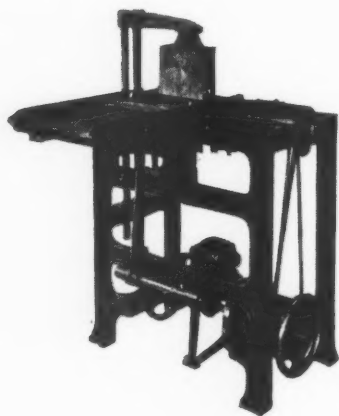
Branch Offices: NEW YORK CLEVELAND CHICAGO  
LOS ANGELES (KRUGH EQUIPMENT & SUPPLY CO.)

# Save Time - Money - Labor with Peters Machines

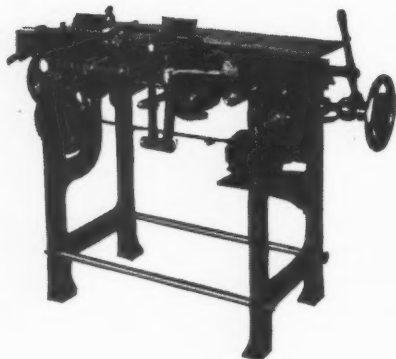
The new year has brought almost complete conversion to peacetime products and with it the need for low cost packaging.

Those producers who are using PETERS economical Packaging Machines have found that the conversion has been very simple and requiring a minimum of labor and expense. If you are still setting up and closing cartons for your product by hand, it will pay you to investigate.

Send us a sample of the various cartons you are now using. We will gladly send specific recommendations.

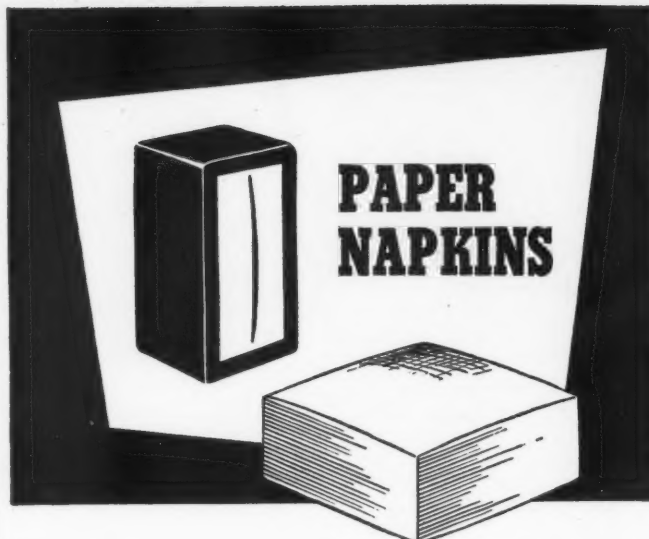


This PETERS JUNIOR CARTON FORMING AND LINING MACHINE sets up 35-40 cartons per minute, requiring only one operator. After the cartons are set up, they drop onto a conveyor where they are carried to be filled. If you desire to handle several sizes of cartons, machine can be made adjustable.



This PETERS JUNIOR CARTON FOLDING AND CLOSING MACHINE closes 35-40 cartons per minute, requiring no operator. After cartons are filled, they enter machine on conveyor and are automatically closed. Can also be made adjustable to handle several different size cartons.

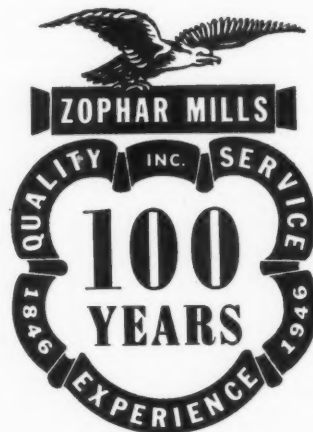
**PETERS MACHINERY COMPANY**  
GENERAL OFFICE AND FACTORY  
4700 RAVENSWOOD AVENUE, CHICAGO, ILL.



ANY fold desired. Plain, embossed or printed—our machines will make them. • High speed. An excellent product. Lowest production costs. • Start your post-war production program with the best equipment. Plan for this production now. • We will send complete information — ask us.

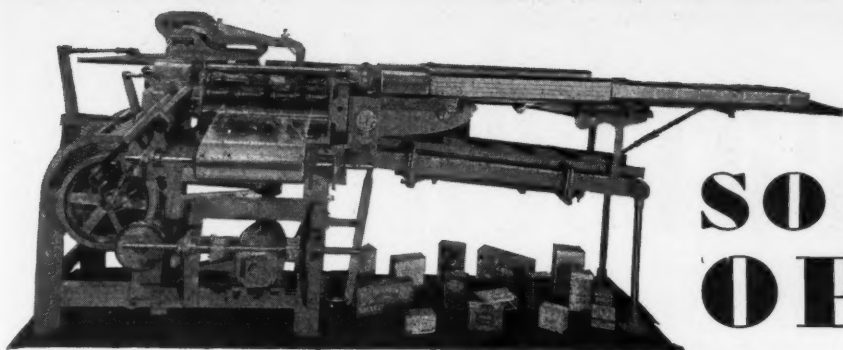
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MACHINE CO • GREEN BAY • WIS

## ZOPHAR WAXES FOR PAPER BOARD IMPREGNATION



Zophar Mills, Inc. has been known for its dependable service and uniformity of product since 1846.

**ZOPHAR MILLS, INC.**  
ESTABLISHED 1846  
106 26th STREET • BROOKLYN, N. Y.



# SO EASY TO OPERATE

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IT PAYS  
TO WRAP  
THE HAYSSEN  
WAY  
•

Hayssen Package Wrapping Machines, built to give your product the best in wrapping service, are so simple in operation that a girl can easily handle them. The adjustment from one size package to another is accomplished in a jiffy... in addition, the Hayssen can accommodate a wide range of sizes and products. If you are interested in a wrapping machine that requires low capital investment, a minimum of floor space, that is fully automatic and gives you high-speed, low-cost wrapping, we suggest that you write the factory today.

HAYSSEN MFG. COMPANY • SHEBOYGAN, WIS.

**HAYSSEN** WRAPPING  
ELECTRONIC CONTROLLED MACHINES

**We HAVE**

THE PRESSES...  
THE TIME...  
THE STOCK...

**WE CAN PRINT:**

Up to 44" ANILINE  
1 to 4 colors

Up to 45" CYLINDER LETTERPRESS  
1 to 5 colors

Up to 11" ROTO EXPERIMENTER  
2 colors — solid third color

**WE CAN PRINT ON:**

- PAPER AND PAPER BOARD UP TO .030
- CELLOPHANE, ACETATE, GLASSINE
- PLASTIC FILM • METAL FOILS
- AVAILABLE-TONS OF SHREDDED PAPER

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**LEEDS SALES COMPANY, INC.**

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We cordially invite you to send us your inquiries concerning the technical uses of paper in your peacetime production and packaging.

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Moisture Vapor Barriers	Waterproof Case Liners	Specialty Handmade Bags
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NEW PLASTIC COATED FOILS, FABRICS AND PAPERS TO WATERPROOF AND MOISTURE-VAPOR PROOF PACKAGES. ALSO, PROTECTION AGAINST MILDEW, ACID, DAMPNESS AND RUST.



*"The Miracle of Plastic Coating"*

*mailed on request*

**CLEAVELAND**

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Pioneers in the application of Plastic Coatings to Textiles and Paper  
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## Get Your Name On Our List...

The post war Milgate Line of papers is being built up eventually to include all types of cloths, acetates, foils, boards, glassines, cellophanes and papers, "hot-melt" coated and/or laminated, as well as aniline printed if desired.

About six Milgate Line papers are now available for immediate shipment. These include "Astex," an industrial waterproof wrapping; "Silver-glas," a novelty decorative sheet; "Milgate Gift Wrap," an aniline printed gift wrapping in thirteen designs; "Freez-Pac," a coated parchment with an extremely low MVTR rate designed for frozen food packaging and "Sheencote," a high gloss, water and soil proof cover paper.

Send us your inquiries...we will supply you with samples and price lists of the present line. New Milgate papers will be coming through regularly...samples and prices of all new items as the line is expanded will be in your hands promptly.

Make inquiries now...it will be to your interest to get your name on our list.

**The Milgate**  
LINE

**PACKAGING DIVISION**  
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784 Public Ledger Bldg., Philadelphia 6, Pa.

## TUBULAR PACKAGES

*for* Lipsticks  
Powders  
Drugs



Tubular packages

have found wide use under war-time shortages and peacetime necessities. They are self-labelled, attractive, sturdy, lightweight, in a wide range of colors and many possibilities of application. Let us show you. Send for samples.

Diameters:  
1/16" to 3"

**DIAMOND STRAW & MACHINE CO**

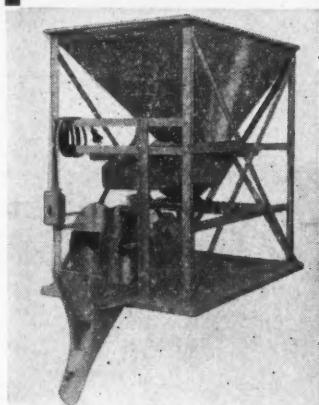
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New York



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## FOR YOUR PACKAGING MACHINERY REQUIREMENTS

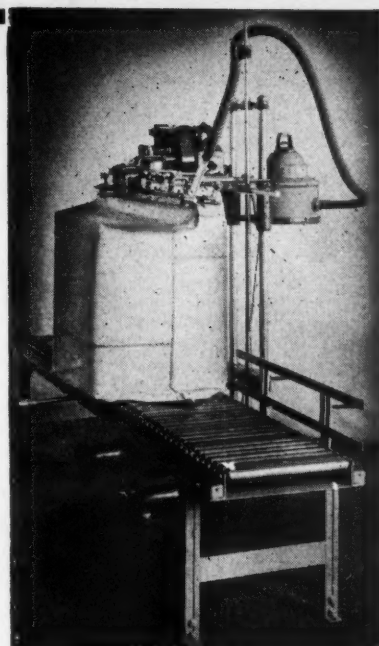


Holm Weighing  
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Machine

For greater efficiency, speed and economy, AMSCO offers machinery to perform the following operations.

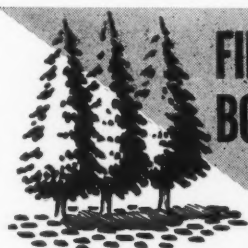
1. Wrapping
2. Sheeting and gluing
3. Bag making
4. Bag and carton weighing and filling
5. Bag sealing, large and small
6. Sandwich making and wrapping
7. Hand and foot operated sealing devices — hot plates and sealers

LITERATURE AVAILABLE



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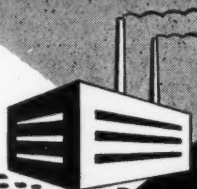
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### FINE WOODEN CHESTS BOXES-DISPLAY CASES

*"From Standing Timber  
to Finished Product"*

We specialize in the design and manufacture of silverware chests, jewelry and display cases, wooden boxes, packing cases and other wood containers. Your inquiry invited.



**ROCK**

*Manufacturing Company*

STOUGHTON, MASSACHUSETTS

## BE SQUARE WAX

### Means Positive Protection to the Point of Sale!

Your customers depend on your product reaching them unaffected by harmful elements—its high quality positively protected and unchanged. One of the outstanding and unique properties of Be Square Wax is its microcrystalline structure. This single property assures necessary resistance to the transmission of water vapor and other deteriorating elements. With high melting points (170/175°F and 190/195°F), and flexibility in thin films, Be Square Special Wax is the answer to the positive protection your products need—all the way to the point of sale.

Write today for full information and samples of Be Square Special Waxes—available in white, black and amber.



**BARECO**

BOX 2009



**OIL CO.**

TULSA, OKLA.

## A NORWOOD FIRST Comes to Life

Here is the first unit in Norwood's postwar line of paper finishing machines—the Norwood Medium Duty Embossing Machine for widths to 65 inches. Completely equipped with anti-friction bearings, this Norwood achievement is built for the high speeds and high pressures of today and the future.

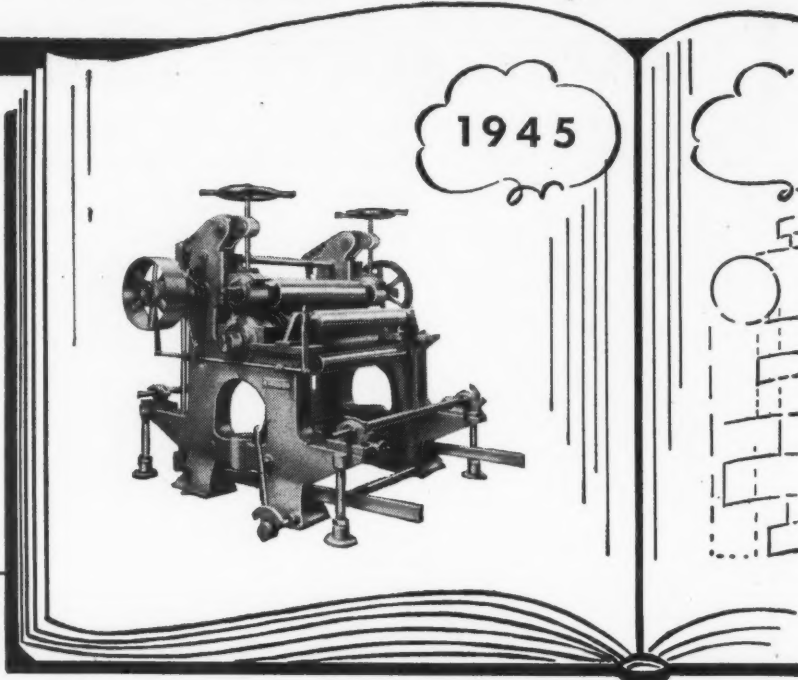
Belt drive, as shown, or variable speed motor drive, according to your power facilities—screw and lever pressure unit to which pneumatic or hydraulic pressure may be added as original equipment or at a later date—open-face construction for quick roll changes—these are construction features that make the Norwood Embossing Machine outstanding.

In short, here is the ideal Rotary Embosser for use on Cover Papers, Papetries, Greeting Cards, Box and Packaging Papers and Artificial Leather—built by Norwood to meet the needs of today's packaging industry. Other models under construction to meet every requirement of speed, pressure or width.

C-3

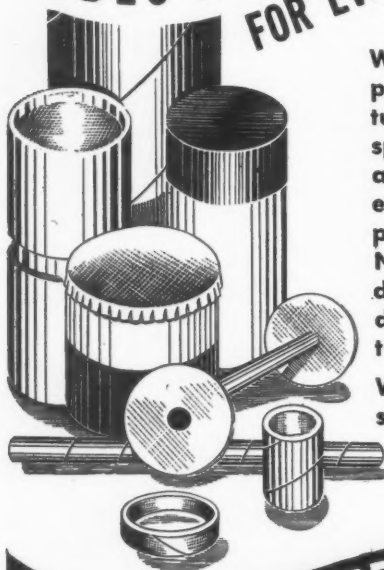
### The NORWOOD ENGINEERING COMPANY

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*"If you use Paper - you can use Norwood"*

### TUBES AND CONTAINERS FOR EVERY PURPOSE



We manufacture paper cores, mailing tubes, ribbon blocks, spools, paper boxes and cans with metal ends, curled ends, paper cap ends. Noted for fast production—any length, diameter, wall. Containers developed. Write or call for samples.

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### When Eye-Appeal Means Sales-Appeal



Your product looks better—sells better—when set off by a Lanova box or specialty paper.

- Metal Foils
- Fancy's
- Embossed
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Large varied stocks maintained for immediate delivery. Write for sample sheets and books—on your letterhead, please.

Consult without obligation our staff of packaging-design experts—at your service always!

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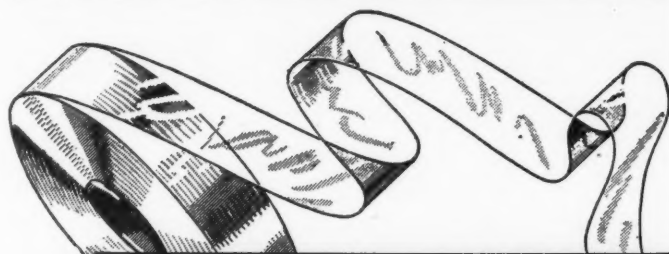
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*- Finishing -*  
*it's the Finish that counts!*

In packaging, the finish is important, too! Beautiful colors and designs need the extra sparkle of a good coating, the extra distinction of embossing or die-cutting.

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A Pioneer Converter of  
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**HEAT  
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*Identify*

**FOOD PRODUCTS**

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**FOOD  
LABEL**

the paper that will identify  
your food products

This new food products label paper has been developed as a result of government instructions to packers to place bands on frankfurters, sausages and other prepared meats in conformity with Pure Food Laws. Odorless — therefore particularly adapted for labeling food.

**EASILY ATTACHED . . . heat sealing**

Temperature for proper sealing depends upon length of time of contact with heating element and amount of pressure applied, but 225°-250° F. appears to be satisfactory on most equipment. Sticks to moisture-proof heat sealing cellophane at 225°-250° F. Send for additional test samples.

**COMPLIES WITH ALL  
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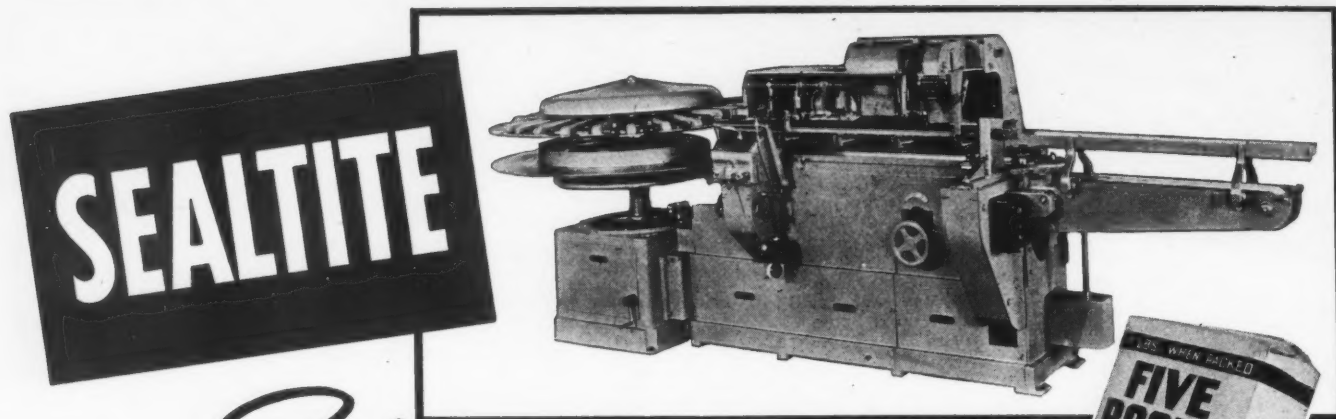


McLAURIN-JONES COMPANY • BROOKFIELD • MASS.

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## *Seals* **BAG PACKAGES** **FASTER with LESS HELP**



SEALTITE Bag Sealers pay dividends any time in increased production and reduced labor costs but right now the savings are greater than ever. SEALTITE seals any standard 2 to 10 lb. bag faster and with less help than it can be sealed by other methods.

The SEALTITE package is well settled and nicely square at top, bottom and sides. A most

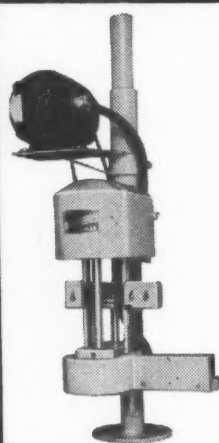
attractive package, it can be stacked like a carton for display purposes.

Since SEALTITE packages are sift-proof, they are ideal for sugar, salt, flour, coffee and similar commodities.

Write for complete information on this better way to close paper bags.



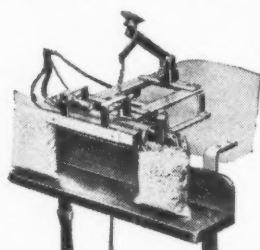
**CONSOLIDATED PACKAGING MACHINERY CORP.**  
BUFFALO, N. Y.



**DOUGHBOY  
ROTARY**

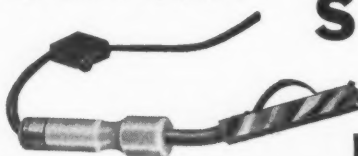
The high production sealer—seals any size bag, pouch or barrier—all materials. Ideal for today's varying requirements. Fast—dependable. Operates vertically, as shown, or horizontally. Used in quantity by largest firms in many fields... 35 in one plant!

## **PACK-RITE** HEAT-SEALING



**TECH-MASTER**

Bags fed vertically—Sealing bars operate horizontally—Seals close to contents—Heavy bar pressure—Light foot pedal touch—Thermostatic heat control—Seals all materials—Adjustable metal feed tray auxiliary equipment.



**MULTI-USE**

**PACK-RITE MACHINES**  
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Please rush complete information on your Heat Sealing Machines to:  
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Firm.....  
Address.....  
City.....State.....

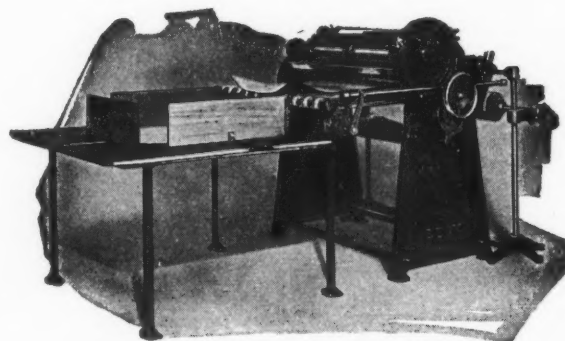
Light in weight—easy to use—3-heat switch. Fast! Dependable! Economical! Accurately and easily manipulated for spot or flat sealing—just the thing for your packages, overlays, etc.

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**ARE YOU EQUIPPED** to meet  
**RE-CONVERSION** and its acutely keener competition?

**BECK SHEETERS** designed and built for the mastery of accuracy and low costs, possible only through their dependable and automatic operation: these can be the unfailing answer to your needs.

Equipped with **ELECTRIC-EYE** and **SHEET-PILER** with **AUTOMATIC LOWERING TABLE** represents the latest in high production, automatic sheeting work.



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**THIS  
"READY MADE"  
PACKAGING  
DEPARTMENT  
CAN SAVE  
YOU MONEY**

*We have*

**THE ORGANIZATION  
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THE "KNOW-HOW"**

Our custom packaging department will do your packaging for you. All set-up and running, we are ready to take on your job.

A long record of successful packaging for other companies is your best guarantee of good service. We handle all types of dry powders, chemicals, cosmetics and household products in cartons, cans, set-up boxes, round paper packages or envelopes. We do your mixing, filling, weighing, labelling, etc., on high speed automatic equipment. Call on us to handle all or part of your packaging.

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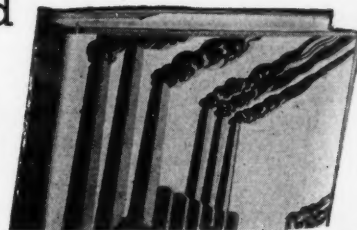
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**Putting sales-power into  
products and  
packages**

**See the 22 elements  
that assure the complete, effective development and design job.**



Here is a sure-fire approach to the salability of your product—a new marketing technique which hits each development-aspect all the way down the line and translates it into a feature which will ensure the inherent marketability of the commodity. This book brings you the first organized treatment of the new essential business function which takes the guesswork out of measuring public reception, and assures your product and the package the sales that are expected.

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### DEVELOPING MARKETABLE PRODUCTS AND THEIR PACKAGINGS

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Send me Nash's Developing Marketable Products and Their Packagings for 10 days examination on approval. In 10 days I will send \$5.00, plus few cents postage, or return book postpaid. (Postage paid on cash orders.)

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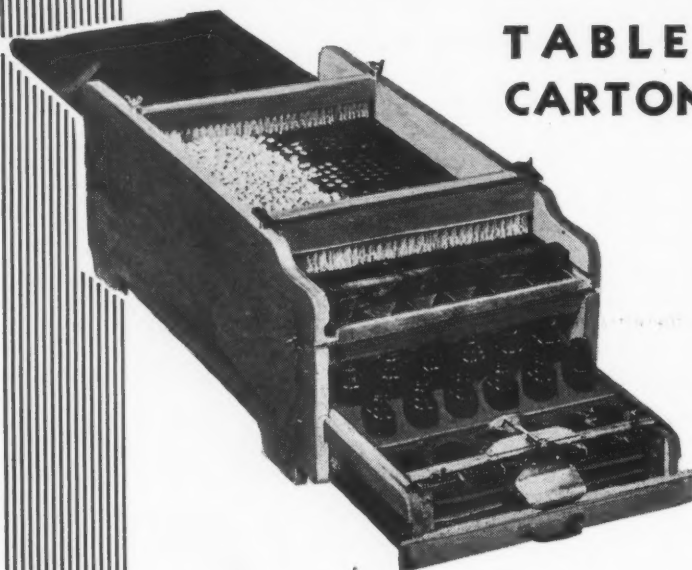
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# Counts & Packages



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• Simple sturdy machine, OTTA-MATIC tabulating and packaging machine increases production as much as 600%. This little giant, 32" x 16" is light weight, (55 lbs) sturdy, completely sanitary, instantly adjustable to all sizes of tablets and containers. Nothing to wear out or get out of order.

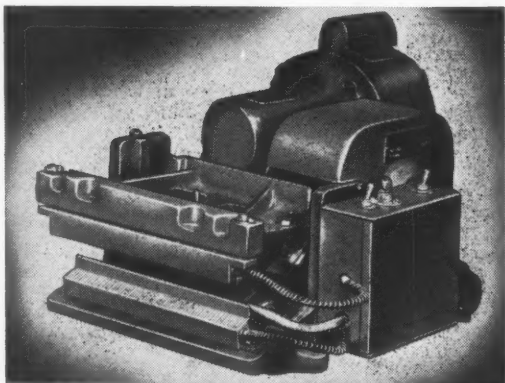
One user writes "We were able to bottle and label 250,000 capsules in six hours with two girls operating the machine." This machine must be seen to be appreciated. Ten day free trial offer is your best proof of efficiency, money saving, accuracy, speed and durability.

This machine is guaranteed for one year.

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## Heat Sealer



Wrapade automatic and semi-automatic heat seal machine handles foils, cellophane and other heat-sealed materials. It also applies correct amount of heat and pressure in proper time cycle to make secure and lasting sealing. Can be operated with perfect efficiency by unskilled labor. Applies uniform pressure, resulting in sift-proof, tamper-proof, dust-proof and sanitary packages without glue or staples. Saves its own costs in bag size, staples, glue, etc. Prices and further information on request.

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SEALING  
TAPES



In "Red Streak" Sealing Tapes you find a combination of good paper, good glue and plenty of it—use "Red Streak" and end your sealing problems.

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for details, samples,  
prices.



"Red  
SEALING

"Streak"  
TAPES

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**HEAT SEALING**  
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122 East 42nd Street, New York City

Signed *John Doe* Salesman's Signature      Signed *Alfred Cole* General Manager

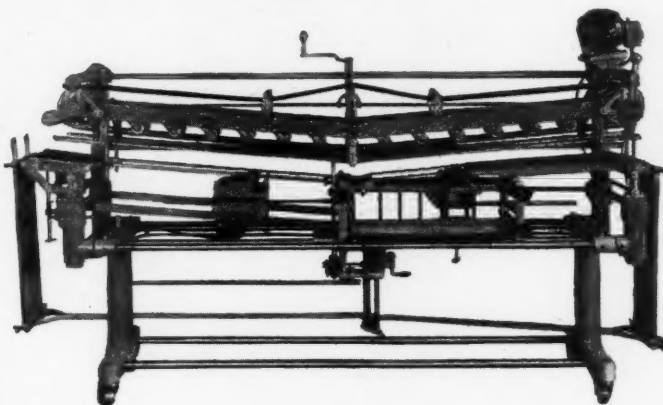
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**Rugged construction** to assure you of years of constant operation . . .

**Easy-Maintenance features** to minimize shutdowns for servicing . . .



## NEW WAY LABELER

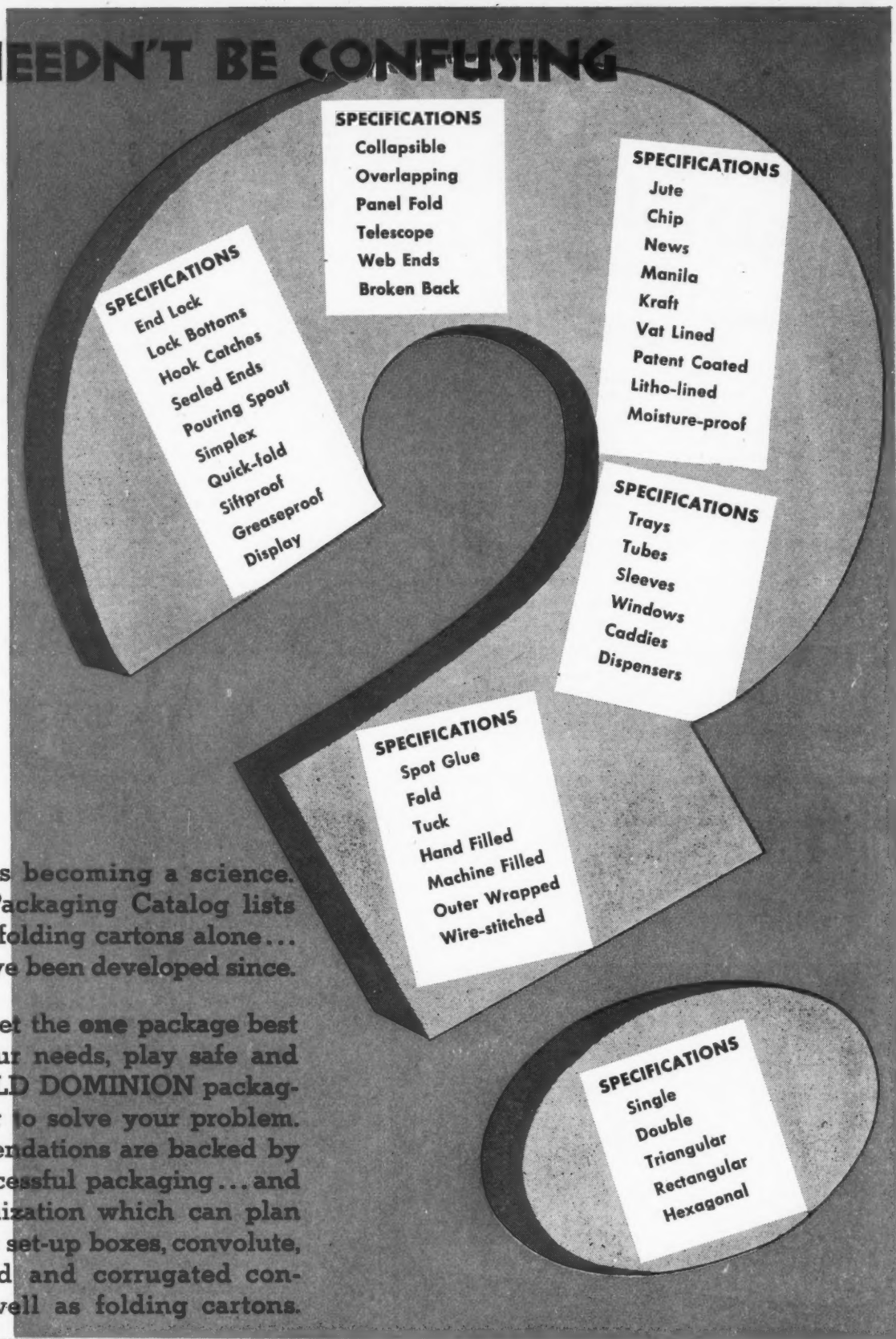
### COMPARE THESE FEATURES:

- Precision-built throughout, with all parts machined.
- Patented aligning device keeps labels centered at all times.
- 27-inch width permits using in narrow aisles.
- Less lap-end paste required.
- Enclosed glue pot prevents contamination of gum.
- Thermostatic heat control assures positive maintenance of temperature
- V-belt carriers run on beads of cans, preventing an accumulation of pick-up gum.
- Enclosed drives packed with grease minimize noise and wear.
- Patented extra long revolving seaming pad.
- Timing device for use with containers having bale ears and for jugs with handles.
- Can be equipped with CRCO-New Way Can Marker.
- Fully adjustable models permit range of containers from 1 3/4" to 6 11/16" diameter by 1 3/4" to 9" high.
- Can be supplied for all-around or spot labels.
- Three simple changeover adjustments: handle to set diameter, handle to set for height, handle to set glue pot—each operation indicated by vernier scale.

THE BEST OF  
Everything  
IN LABELING  
AND CASING  
EQUIPMENT

**Chisholm-Ryder**  
COMPANY OF PENNSYLVANIA  
HANOVER, PENNSYLVANIA

# IT NEEDN'T BE CONFUSING



Packaging is becoming a science. The 1945 Packaging Catalog lists 47 styles of folding cartons alone... and more have been developed since.

In order to get the **one** package best suited to your needs, play safe and call in an **OLD DOMINION** packaging engineer to solve your problem. His recommendations are backed by years of successful packaging... and by an organization which can plan and produce set-up boxes, convolute, spiral-wound and corrugated containers as well as folding cartons.



**OLD DOMINION** *Box Company, Inc.*

"THE SOUTHERN BOXMAKER WITH A NATIONAL REPUTATION"

CHARLOTTE, N. C.

New York Representatives, BAKER PRESS, 228 East 45th St., New York 17, N. Y.

All classified advertisements payable in advance of publication. Rates: \$5.00 up to sixty words, enclosed in border, \$10.00 per inch.

## Classified Advertisements

Publisher reserves the right to accept, reject or censor a classified copy.

In the market for one used but in first serviceable condition Paper and Cloth Gumming Machine, 63" wide. Send proposals to Mr. Ciro A. Martinez, Purchasing Agent, Apartado Postal No. 755, Monterrey, N. L. Mexico.

### PACKAGING AND EQUIPMENT LINES WANTED FOR SOUTH

A long established substantially rated agent and distributor with a sales organization of 15 men trained in specialized selling is open for lines of packages, packaging supplies, packaging and material handling equipment for sale in states of Tennessee, Alabama, Mississippi, Arkansas, Louisiana, West Kentucky, South Missouri, East Oklahoma and East Texas.

Offices in Memphis, Nashville, Shreveport, Birmingham now represent several leading national manufacturers. Can handle additional non-conflicting lines either on commission or jobbing basis.

Write Wurzburg Brothers, 710-24 South Fourth Street, Memphis, Tennessee.

EMBOSSER MACHINE WANTED: 48" to 60" wide, to handle web stock. Box No. 358, Modern Packaging.

### INDIA'S

markets require consumer & industrial products. We submit reports, fix agencies, undertake publicity. Great India Publicity Co., 31 Hamam St., Bombay, I. N.B. Appreciate receiving pub. samples, houseorgans, mail from admen & mfrs. Also packaging materials agency offers. Send full details, samples if possible.

Packaging Development Engineer desires position. Eight years experience in research, design, development, production, and control as head of department for large pharmaceutical firm in New Jersey. Box 376, Modern Packaging.

### CELLOPHANE BAG-MAKING MACHINES

Used "CLIPPER" heat seal cellophane Bag-Making Machine for sale.

Immediate Delivery—Write Box 377, Modern Packaging.

Chemical Engineer, B.S. 1939, Tau Beta Pi, Sigma Tau. Three years Army experience corrosion control and packaging engineering at Engineering Division, Wright Field. Army major expecting release soon. Three years industrial experience petroleum research. Desire employment with an aggressive company in capacity which will utilize technical background and continue my extensive contacts with manufacturers and consumers of packaging materials. Box 380, Modern Packaging.

### Venezuelan Representative

Recently established Company is desirous of obtaining representation of American manufacturers. Excellent commercial references and banking information. Ramon Gil & Cia, Apartado No. 1586, Caracas, Venezuela.

Highly Successful Packaging Salesman—ten years art, printing and plant experience prior to twelve years selling career representing first class Canadian Paper Box Company; personally creating and developing his own packaging and display ideas offers his wide sales promotional experience to help and train younger salesmen along sound, practical lines. Advertiser convinced he could be of inestimable value to a growing progressive paper box company desirous of developing new business from leading users of high class packages. Reply Box 378, Modern Packaging.

Well established import house desires to contact leading Packaging firms and Paper Converters interested in the manufacture of their products in Australia on a royalty or similar basis. First class bank and business references. Write to J. Jacobi & Co. Pty. Ltd., P.O. Box 3581, G.P.O. Sydney, Australia.

Packaging—Promotion or Direction  
Lieutenant three years Navy Packaging Branch; one AAF Packaging; six Engineer of corrugated, solid and cleated fibre, and folding cartons; six Art Director same fields. Available January 15th. Box 379, Modern Packaging.

### FILLING MACHINERY WANTED FOR IMMEDIATE DELIVERY

Need four (4) fully automatic filling lines for sealed cardboard cartons to handle free-flowing powder. Fully automatic top and bottom sealers necessary. Size ranges: thickness: 3/4 in. to 1 1/4 in. width: 2 1/4 in. to 6 1/4 in. Height, 3 3/4 in. to 8 1/2 in.

HOOD CHEMICAL CO., INC.  
1819 Broadway, New York 23, N. Y.  
Phone, Columbus 5-0116.

### MANUFACTURERS' REPRESENTATIVE

An established Sales Organization well acquainted with Paper trade in Cincinnati, Ohio, and surrounding territory, desires additional lines. Address Box 381, care Modern Packaging, Chanin Bldg., 122 E. 42nd St., New York 17.

### WANTED

#### GENERAL SALES MANAGER

Experienced and proven General Sales Manager for a national business in the container field. Must have established record in cans or other containers or varied line of packaged merchandise. Headquarters in New York City.

Excellent salary and other benefits for the right man. Box 382, Modern Packaging.

PACKAGING SPECIALIST: 20 years' experience, creative and executive, in structural design and styling for all types of packages, devising of folding boxes and displays, shipping containers, etc. Thorough knowledge of related production and merchandising requirements. Currently active on retainer and consultant basis, and available for freelance commitments. Under acceptable conditions would consider position as permanent Packaging Director. Box 383, Modern Packaging.

### PACKAGE DESIGNER

Artist to assist Sales Research Director in rapidly expanding cosmetic manufacturing and sales organization. Must have background of lettering and decoration, and be able to produce clean, crisp color sketches for cosmetics, toiletry, perfume and gift packages. Experience in this field will be given special consideration. This is an unusual opportunity for ambitious man or woman to participate in development of merchandise from product idea to final promotion. Write, stating experience and salary desired, to Mr. F. Goldsborough, care C. H. Stuart & Co., Inc., Newark, New York State.



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### Aniline Press For Cellophane

(Model 304)

4-Color Multi-length pigmented Aniline Ink Web Printing Press with Unwind, Slitters and Dual Shaft Rewind. Especially suitable for cellophane.

Note: Continuous drive for ink fountain rollers;—long, variable drying runs between first and second colors, also after last color before rewinding.

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We can serve you with:

ROUND BOXES  
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PAPER CANISTERS  
CATALOG PRINTING  
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*Heminway* Corporation  
(formerly Waterbury Paper Box Co.) Waterbury,  
Connecticut

NEW YORK SALES OFFICE—30 ROCKEFELLER PLAZA, NEW YORK 20

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**MODERN PACKAGING**  
**BRESKIN PUBLISHING COMPANY**  
 122 East 42nd St.  
 New York 17, N. Y.

when transparency  
alone is not enough



specify

# VUEPAK

To sell, show!

That selling axiom has become so well recognized today that nearly everybody seems to be trying to get his product into some kind of a transparent package.

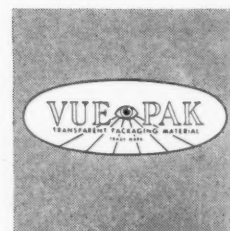
But often transparency is not enough. Products like candy, for example, frequently need protection as well as display.

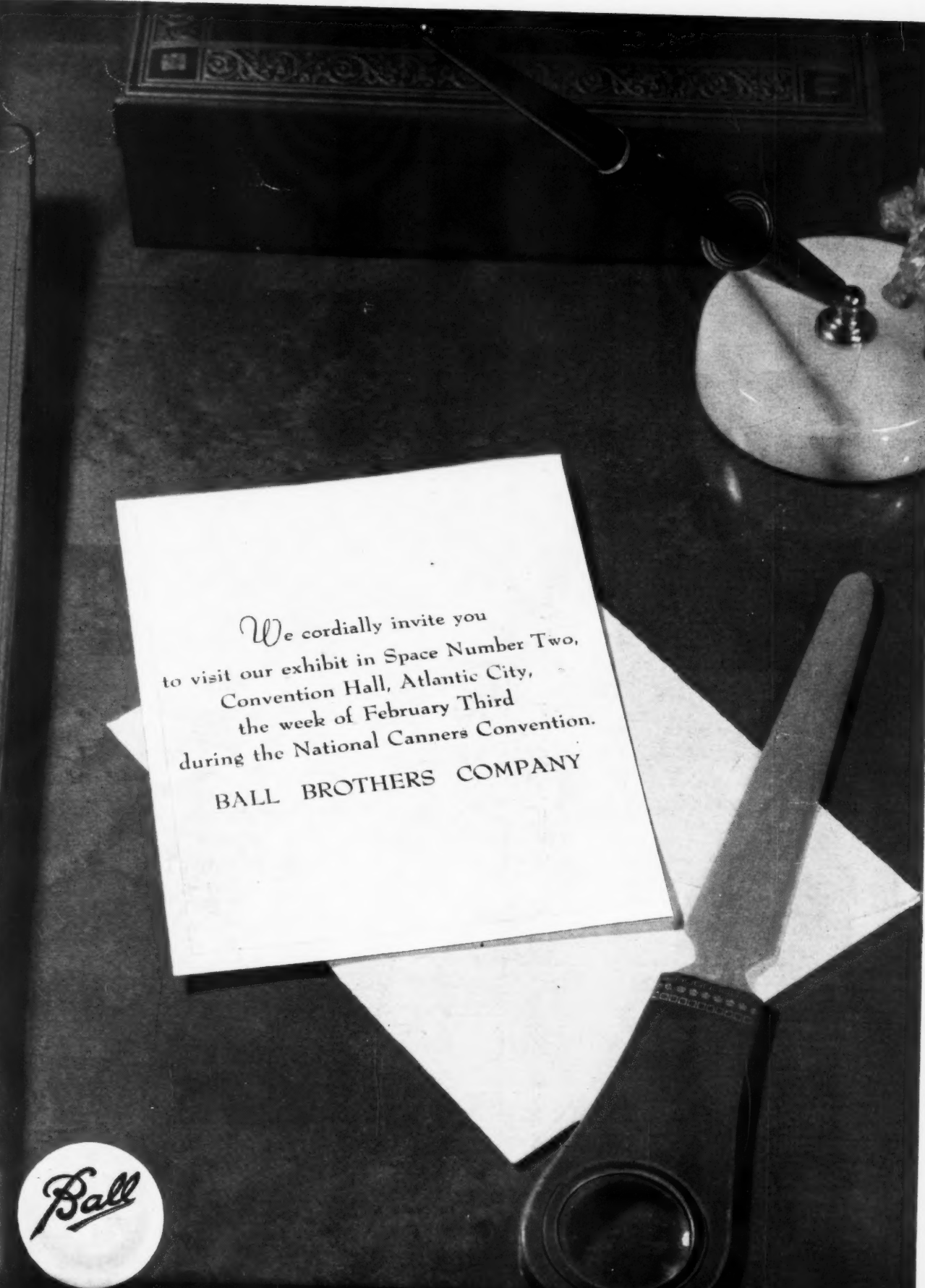
And that's why so many smart manufacturers have packaged in Vuepak,\* beautiful, sparkling, transparent and rigid. Rigid Vuepak gives physical protection. And it displays well, stacks well, survives shop wear. It is tough, greaseproof, non-aging.

Vuepak is already counter-proved, and is available again in a limitless number of sizes, shapes and combinations...quality packages that command quality prices. Better get full Vuepak facts today from your box maker...or direct from: MONSANTO CHEMICAL COMPANY, Plastics Division, Springfield 2, Massachusetts.

## QUESTIONS AND ANSWERS ON VUEPAK

- 1. What is Vuepak?**  
Vuepak is a transparent, tough, rigid, beautiful Monsanto cellulose acetate.
  - 2. In what form is Vuepak available?**  
In sheets up to 30" wide, and in continuous rolls 30" wide up to 1000 ft. long, depending upon thickness.
  - 3. In what thicknesses is it ordinarily available?**  
In six standard gauges 0.005" to 0.020".
  - 4. Does sunlight affect it?**  
No.
  - 5. Is it affected by heat?**  
Not under ordinary temperatures. It begins to soften after 200° F. Underwriters' Laboratories classification, "slow burning".
  - 6. How can it be fabricated?**  
It can be drawn, shaped, formed or folded into almost any shape with inexpensive dies. It can be embossed, stapled, printed, cemented, or combined with other materials.
- \*Reg. U. S. Pat. Off.





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Convention Hall, Atlantic City,  
the week of February Third  
during the National Canners Convention.  
BALL BROTHERS COMPANY



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MUNCIE, INDIANA,

U. S. A.

# S.R.U.

with "Dehydrapac"\*



**SIZE RANGE UNLIMITED** . . . from needles to jeeps, from davits to divi-divies. Regardless of the product, its size or destination, Shellmar's "Dehydrapac" can be engineered to provide absolute protection against rot, rust or corrosion . . . during long periods of shipment and storage.

\* Shellmar's name for dehydrated packaging, also known as Method II . . . the war packaging method using flexible, heat-sealable membranes of low water vapor permeability with a dehydrating agent.

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